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# PES OF FARMING IN CANADA

A CO-OPERATIVE STUDY BY THE ECONOMICS DIVISION MARKETING SERVICE AND THE CENSUS DIVISION DOMINION BUREAU OF STATISTICS

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MINISTER OF AGRICULTURE, OTTAWAY CANADA

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### **FOREWORD**

A relatively wide range of agricultural products is produced on Canadian farms. These products, varying in nature, are often widely distributed and raised in differing proportions. The distribution of the products and the efforts of farmers to adjust their cropping practices and livestock production are basically determined by physical conditions and modified by economic factors.

The term, type of farming, is used in this study in the commonly accepted manner to indicate the kind of farming followed on a group of farms having a high degree of uniformity. In a type-of-farming area a relatively small variation is found in the kinds of crops, the proportion of cropland devoted to each crop, the numbers, kinds and relation of livestock to improved land and in the usual methods of farm practice and conducting of the farm business.

It should be pointed out that the type-of-farming areas outlined in this study portray the farm situation as it existed in Canada according to the 1941 census. Changes in economic conditions, in machinery, newly introduced crops and new crop varieties, improved livestock strains, new cultural practices, new disease and pest hazards, deterioration of land resources through soil erosion and other factors develop continually and in a relatively short time may modify the type of farming. These conditions may alter the pattern of agricultural production in its entirety or in one or more of the enterprises of the farm business.

## RELATION OF PHYSICAL AND ECONOMIC FACTORS TO THE GEOGRAPHIC DISTRIBUTION OF TYPES OF FARMING IN CANADA

The interaction of environment, production resources and economic conditions determines the types of farming. Farming changes in character from one part of the country to another. These changes are usually gradual but in many cases they are sudden and represent a distinct break in the kind of agriculture followed. In general, the variations result from the efforts of farmers to adjust their operations to both physical and economic conditions.

### **Physical Factors**

The influence of physical factors on the types of farming are restrictive in nature. Conditions of temperature and precipitation in the various areas and the various seasons determine, on the one hand, the absolute limits of crop production; on the other hand, the physical factors of temperature and precipitation determine, through relative yields, the proportion in which the various crops are grown. In addition to temperature and precipitation the physical factors of topography and soil have an influence in shaping the pattern of agriculture although the effect has not been uniform by any means. In certain areas temperature is the limiting factor; in others, precipitation; and in others, topography or soil.

Climate.—The types of crops and the classes of livestock found in the various type-of-farming areas are determined climatically by their adaptability to the variable length of growing season, by the intensity of heat and cold during the summer and winter seasons, by the amount and distribution of precipitation and the evaporation of moisture efficiency.

There is a very close association between climate and topography. The climate of British Columbia, on the west coast of Canada, is influenced by the Pacific Ocean and the mountain ranges of the interior and eastern part of the province. Along the extreme west coast and on Vancouver Island the climate is of the marine type, with a comparatively long growing season, moderate temperature and relatively high precipitation. Such a climate is particularly adapted to the production of small fruits and market garden products in areas close to the city markets and to dairying and beef cattle production in the more distant areas. The plateaux of interior British Columbia experience a much drier climate than that of the coast region. In the southern interior valleys, where irrigation is possible and has been introduced, an intensive fruit-growing area has been developed. The more northerly and also scattered areas of this part of British Columbia, where the winters are more severe, are better suited to cattle and sheep ranching.

A climate of wide variability in all seasons of the year occurs in the three Prairie Provinces of Alberta, Saskatchewan and Manitoba as a result of their continental location. Physical features such as the presence of mountain ranges on the west, the distance from large bodies of water and the three general

steppes or levels of the whole plain result in wide differences in climate. Variations in temperature are extreme between summer and winter and also within each season.

The summer season, and more specifically the growing season (considered from the date of the last killing frost of spring to the first killing frost of fall), is of longest duration (120-140 days) in southeastern Alberta and southwestern Saskatchewan and decreases generally to the east and north, with the shortest period in the northern fringe areas of settlement (about 75 to 100 days). Much local variation, however, is found in the length of the growing season. The greater length of days (hours of sunshine) in southern sections is very noticeable and affects the rapidity of plant growth. The winter season is moderately long and often severe low temperatures are encountered.

As in all continental climates, precipitation is the chief limiting factor. The general range in annual precipitation is from 10 to 20 inches, but in small areas is as much as 30 inches. In the western part of Saskachewan, southeastern Alberta and in the northern settled areas of these provinces the annual precipitation usually ranges from 10 to 15 inches. In the more arid areas of southeastern Alberta and southwestern Saskatchewan, the annual precipitation is often less than 12 inches. In southeastern Saskatchewan and in most of Manitoba, it ranges from 15 to 20 inches. In a portion of the Red River Valley and in a narrow strip of Alberta bordering on the Rockies precipitation exceeds 20 inches and often reaches 30 inches.

Of special importance, however, with respect to precipitation in the Prairie Provinces, is the fact that about 60 per cent occurs during the growing season. This is the redeeming feature in connection with cereal production and permits a relatively high utilization of precipitation in a semi-arid country.

The great variability in the extent and quantity of summer rainfall and the frequent occurrence of great heat during dry spells constitute the major problems of agriculture in the Prairie Provinces. In view of these facts, however, the relative degree of availability of the precipitation or moisture to crops is of great importance. The combined effect of annual precipitation, annual temperature and seasonal evaporation during the period from May to September generally favours a wider choice of crops in the parkland regions of each province.

The vast area of the province of Ontario results in a wide variation in climate. Topographical and geological features limit the agricultural areas largely to the southern part of the province. However, considerable agricultural development has recently taken place in the more northerly sections, often in relatively small and isolated areas where soil and topography are suitable.

The climate of the more southerly part of Ontario is tempered to a large extent by the proximity of the Great Lakes. Temperatures are generally not so severe in the winter as in the Prairie Provinces while the summers are generally cooler. Rainfall is more adequate and only in exceptional years is it insufficient for the satisfactory production of grain and hay crops. In the most favoured areas, such as the Niagara peninsula, fruit growing is well developed and is practised without any serious loss from extreme climatic conditions. Further inland, temperatures decline slightly as one goes north or to the northeast resulting in a gradual change in the average length of the frost-free season from 216 days at Leamington, in the extreme south of Ontario, to about 168 days at Ottawa and approximately 100 to 120 days in the "clay belt" of northern

Ontario. In the northerly areas the climate is relatively severe, the winters being long and cold with a heavy fall of snow, while the summers afford a relatively short growing season.

In Quebec the agricultural areas are largely confined to the more southerly regions bordering the Ottawa and St. Lawrence rivers. There is substantial agricultural development, however, in certain productive blocks, mainly an easterly extension of the "clay belt" of Ontario around Abitibi and further east, as well as north in the Lake St. John area. In the southerly areas the climate is similar to the adjoining areas of Ontario, although slightly more extreme because of the lesser influence of the Great Lakes. The spring generally opens in April with the first fall frosts coming in September. In the northern settled areas winters are relatively severe, snowfall is heavy and the growing season approximates the limits for arable agriculture.

The climate of the Maritime Provinces is not so mild as might be expected for an area so close to the ocean. The cold Labrador current of the North Atlantic and the cold winds which sweep down from the interior of northern Quebec cause a relatively cold winter and a late spring season. The summers are similar to those in scuthern Ontario but tempered by marine conditions. Temperatures exceeding 85° seldom occur. The fall is generally more open than in Central and Western Canada. Annual precipitation averages from 40 to 50 inches except along the southern coastline of Nova Scotia, where it is nearly 10 inches greater. The snowfall is heavy in most areas of the Maritimes, especially in northern New Brunswick, where its exceeds 100 inches. The climate of the Atlantic provinces is eminently suited to a wide range of agricultural products.

**Topography.**—The character of the land surface limits the extent of arable land. In addition to the very close interrelationship of topography and climate, there is also an association of topography with the geological and soil development.

In Canada, several important physical features limit the extent of the arable soils. Mountainous areas in British Columbia and in the settled areas of the Laurentians are often unsuited even for pasture use. Frequently a large percentage of these areas are bare rock. The Pre-Cambrian Shield alone occupies nearly 50 per cent of the total area of Canada; the Cordilleran region occupies about 14 per cent, while other rough lands would bring the total area of such lands to 70 or 75 per cent<sup>1</sup>.

Large areas of land of strongly rolling and steep topography as well as depressions occur also within the occupied portions. This is true in nearly all sections of Canada. Associated with objectionable topographical features is the prevalence of stones which may limit the arability of land.

In general, within the occupied areas the smoother phases are utilized for arable farming and the non-tillable lands for pasture and forest purposes. Smooth, level land adds greatly to the facility with which labour and machinery may be used. The increased trend towards mechanization in recent years has added to the advantage which level land enjoys over rough and hilly land for arable farming.

The topography of Canada is dominated by the mountain ranges running north and south near the west coast and the Pre-Cambrian region or Canadian Shield, stretching over a large part of Ontario and Quebec and to a lesser extent

<sup>&</sup>lt;sup>1</sup> The Agricultural Soil Resources of Canada. A. Leahey, Agricultural Institute Review. Vol. 1, No. 5, May 1946.

on the northern edge of the Prairie Provinces. The area between these two rocky regions is the northern extension of the North American plain. This plain includes southern Ontario, south of a line from Georgian Bay to the east end of Lake Ontario, that part of eastern Ontario lying between the Ottawa and St. Lawrence rivers and part of Quebec lying adjacent to the St. Lawrence between Montreal and Quebec City and extending in a narrow belt down the river and including Anticosti Island. This section is known as the St. Lawrence Lowlands. The part of the plain west of the Canadian Shield is of wide extent, stretching north to the Arctic and west from Lake Winnipeg in Manitoba to the foothills of the Rocky Mountains in Alberta.

British Columbia extends over that area known as the Cordilleran region. The eastern part of this area is occupied by the Rocky Mountains, consisting of a chain of peaks ranging up to 10,000 and 12,000 feet in height extending from the United States boundary northwest to the Liard River in the north. The Coast range skirts the Pacific with another range on Vancouver and Queen Charlotte islands. The Coast range rises to heights of from 7,000 to 9,000 feet. Between the Coast and Rocky Mountain ranges lies a vast plateau system, having an elevation of from 3,000 to 4,000 feet cut by deep river valleys. In general, only the valleys of the rivers rising in these areas are suited to arable agriculture while cattle and sheep ranching are important types.

The interior Plains region, comprising the Prairie Provinces, is a broad plain with a slope eastward and northward of a few feet per mile, descending from an elevation of from 3,000 to 3,500 feet in the Rocky Mountain foothills on the west to less than 1,000 feet on the eastern border.

The eastern part of the St. Lawrence Lowlands area in eastern Ontario and Quebec is comparatively flat and lies less than 500 feet above sea level. That part lying adjacent to lakes Ontario, Erie and Huron is of less even surface and has its greatest elevation of over 1,700 feet south of Georgian Bay sloping rather gently to the Great Lakes. A striking topographical feature is the Niagara escarpment. This is an eastward facing escarpment having a height of 250 to 300 feet and extending from the Niagara peninsula northwest to the Bruce peninsula.

The Appalachian and Acadian regions occupy practically all that part of Canada lying southeast of the St. Lawrence, with the exception of the lowlands west of a line joining Quebec City and Lake Champlain. The Appalachian region is a northern extension of the Appalachian system of mountains. This region is confined to eastern Quebec. The Acadian region, which includes the provinces of New Brunswick, Nova Scotia and Prince Edward Island is an alternation of highlands and lowlands. The northwest part of New Brunswick is an upland with hills and ridges rising 2,500 feet or higher; adjacent to the Bay of Fundy is a series of ridges rising in places to an elevation of 1,200 feet or more. Between these two uplands is a lowland forming the whole eastern coast of New Brunswick and converging towards the southwest. This lowland extends east to include Prince Edward Island and part of Cape Breton Island and the mainland of Nova Scotia north of the Cobequid Mountains. South of these mountains lies a long narrow lowland stretching from Chedabucto Bay to the Minas Basin and along the Cornwallis and Annapolis valleys between the North and South mountains.

Soils.—Soils affect types of farming largely as they influence the physical adaptability of crops. Each feature of the soil has a direct bearing on the choice of crops. The water-holding capacity of various soils in the Prairie Provinces, for example, greatly influences the type of agriculture. Other physical factors, such as texture, structure and friability are very important. The chemical content and the availability of plant nutrients critically affect the suitability or adaptability of certain crops.

Recognition of the productivity of the soil and the manner in which the farmer selects crops to make the best use of the soil conditions determine the type of farming. The management of the soil through cropping practices and crop rotation relates to the kind and permanency of the farm type.

It has been found possible to group the soils of Canada into several zones on the basis of certain common soil characteristics. In a general way these zones coincide closely with the broad climatic and vegetative zones. The zonal characteristics which reflect the effects of climatic and vegetative conditions have an important bearing on the productivity of the soil.

In British Columbia, along the Pacific Coast and on Vancouver Island, the soils are characterized by a low content of organic matter, by a yellowish-brown to reddish-brown surface soil, and by relatively high acidity. The native vegetation consists of heavy stands of timber. On the mainland lowland soils are, for the most part, recent flood plain and delta deposits of the lower Fraser Valley. These are the most productive soils and are well developed agriculturally.

In the Okanagan, Thompson and in some of the other semi-arid interior valleys of British Columbia the soils vary greatly. The soils at the bottom of the slopes are greyish-brown to brown in colour and a definite succession of changes can be observed as one proceeds to the timber line. In the southern and more arid areas the greyish-brown to brown which are similar to good prairie soils extend further up the slopes, while in the more humid areas of the northern interior valleys these may be found either only in the valleys or in a narrow fringe on the slopes. Further up the slope black soils may be encountered and still further, Grey Wooded soils similar to those of the Prairie Provinces are found.

The soils of the Prairie Provinces have been modified by two main types of origin, those developed under grassland cover and those developed under wooded conditions. Most of the agriculturally developed soils lie within the grassland region which extends northward from the United States border to a line drawn diagonally from the southeast corner of Manitoba to the point where the fifty-fifth parallel cuts the Alberta-British Columbia boundary. Soils of the settled areas north of this line were developed under relatively humid conditions and tree growth. The boundaries between the different soil zones are usually not very sharp and the soils of one zone gradually merge into those of the next. The soils of the grassland region may be subdivided into four main zones, the Brown Prairie soil zone, the Dark Brown soil zone, the Black soil zone and the Degraded Black soil zone.

The major areas of the open plains of Saskatchewan and Alberta with the exception of the Cypress Hills area are within the Brown Prairie soil zone. This is the drier section of the Prairie Provinces and is characterized by a native vegetation of short grasses. The carbonate accumulation in these soils is relatively high in the dominant soil profile and occurs at a depth of 6 to 12 inches. The typical surface soil is light to drab brown and is generally shallower and

lower m organic matter and nitrogen than other grassland soils. Agriculture is practised on an extensive scale, the land being utilized for grain production, mainly wheat, on the better phases and for cattle and sheep ranching on the

noorer non-drought-resistant and rougher phases.

Moisture conditions are somewhat better in the Dark Brown soils. The organic content is also higher and the lime layer is found at depths of 10 to 18 inches. These soils occupy a belt of land to the east, north and west of the Brown soil zone. This area is largely treeless although poplar "bluffs" are of frequent occurrence as this zone emerges into the Black soils. Farm type is largely based on the wheat enterprise as in the case of the Brown Prairie soil zone with minor enterprises in different areas.

The soils of the Black soil zone are richer in organic matter than any other soils of the Prairie Provinces. The depth of the surface layer may vary from 4 inches to 2 feet and the lime layer from a depth of 15 to 36 inches. The native vegetation consists of a mixture of tall grasses and occasional or even numerous aspen groves. Due to the more favourable characteristics with respect to moisture these "parkland" soils are adaptable to a diversified type of agriculture. The Black soils occur in a belt on the outer rim of the Dark Brown soils.

Within the Black soil zone poorly drained depressions or sloughs fringed with aspen or willow often occur. The fertility of these soils is lower than the typical Black soils.

Soils of the Degraded Black zone represent a transitional phase between the Black soils and the forest soils of the Grey Wooded soil zone. Due to the invasion of forests into these grassland soils, the continual process of 'degradation' or leaching has resulted in a more or less pronounced greyish layer or horizon in the lower part of the surface soil. This leaching has resulted in generally less fertile soils than are found in the Black soil zone.

The main soils of the forested region of the provinces of Manitoba, Saskatchewan and Alberta are the Grey Wooded soils. These soils are also found in the wooded sections of central British Columbia and the clay belt of northern Ontario. The typical soils have a grey, leached, ash-like layer or horizon near the surface, immediately below a thin, dark leaf mould. The lime layer is usually encountered at two to four feet. In this section, as has been mentioned, the growing season is shorter than on the Prairies, entirely different problems are encountered and farming is usually of a more general or non-commercial type.

High lime (Rendzina) soils occur in the lake regions of Manitoba and in a section of northeastern Saskatchewan. The excessive amounts of lime and the lack of phosphorus in these soils modify their properties and productiveness. Often the black or greyish surface soil may only be a few inches deep with the entire depth of the soil one foot or less. The underlying material is light grey in colour, containing many limestone fragments and frequent stones.

The Grey-Brown Podzolic soil zone occurs in southern and southeastern Ontario and also southern Quebec. These soils were formed mostly by glacial drift and by lake sediments in the southeastern section of Ontario. These soils were developed under deciduous forest conditions and usually have a thin dark surface soil over a greyish-brown leached layer which rests upon a darker brown layer or horizon. The soils of southwestern Ontario are more deeply weathered and are considered to be more mature than those of eastern Ontario and the Eastern Townships of Quebec. Here also the reaction of the soil varies from alkaline to moderately acid as compared to slightly alkaline to moderately acid

for clay soils and moderately to strongly acid for the sandy soils. The soils of this zone make up the bulk of the important agricultural soils of the central provinces.

There are also several relatively large tracts of sandy soils which have been formed as deltas and outwash deposits near the mouths of large streams which existed during the recession of the last great ice sheet. These are in the counties of Norfolk, east Elgin, south Oxford and west Brant and are now used extensively for tobacco production.

The Podzol soils occur in eastern Quebec and in the Maritime Provinces. These are strongly leached and acid. The depth of the light grey ash-like surface soil, which underlies the undisturbed leaf mat, varies considerably often up to 12 inches. The sub-surface layer has a brown to reddish brown or red appearance. The fertility of the soil declines with the depth and extent of the ash-like surface layer. There is much local variation between the soils of this zone due to the mixed nature of the mineral materials from which they are formed and to topographical and drainage conditions. The soil in some areas is entirely unsuited to farming, while in others it is extremely fertile.

Most of the Pre-Cambrian Shield, which occupies extensive areas in northern Ontario and Quebec, consists of rough lands containing large areas of rock outcroppings and of peat. The agricultural land on the Shield is mainly confined to small areas in river valleys, to some of the smoother ridges along the southern edge of the Shield and to some more or less isolated larger smooth areas. These isolated areas are old lake beds. The important isolated areas are the New Liskeard, the Cochrane-Hearst (northern clay belt) and the Rainy River areas in Ontario and the Lake St. John and Abitibi districts in Quebec.

There is extreme variability in the soils of the Pre-Cambrian Shield. The agricultural land ranges from extreme Podzolic to Grey Wooded soils similar to those in the northern section of the Prairie Provinces. In general, climatic factors limit the adaptability of cereal crops in the isolated areas.

### **Economic Factors**

In addition to physical factors—soil, climate and topography—economic factors play a very important part in determining the pattern of farming in any particular area. The guiding motive in adjusting crop and livestock systems to the physical environment is largely one of profits or net returns. Economic factors, working through changes in the prices of products and changes in cost factors, exert an influence on types of farming as they affect the returns from particular enterprises or combinations of enterprises in relation to the resources used. Such factors include the availability of markets, prices, transportation, and labour.

Availability of markets is of particular importance in connection with perishable products, where transportation costs are high and deterioration likely to take place. The development of the truck as a means of rapid transportation has greatly widened the area of production for city markets of such products as fluid milk and fresh vegetables. However, a large proportion of truck garden produce is still produced within a close range of the larger cities. The location of urban centres therefore has an important bearing on the type of farming practised in their immediate vicinity.

The development of other primary industries such as mining or forestry and the establishment of secondary industries in the vicinity, with their accom-

panying increases in population, create important markets for farm produce, both for direct consumption and for processing. Changes in tariffs may also affect the type of farming of an area by increasing or reducing the export market outlets for particular products.

Other things being equal, there is a general tendency for a more intensive type of farming to develop in the areas relatively close to the ultimate markets, and the more extensive types of farming, such as grain growing and ranching, to be pushed out into the more distant regions. This is not entirely a result of marketing facilities but is also influenced by the relative values of the land. While the value of land will be influenced by the type of farming carried on in any area, at the same time the basic factors of productivity and location will be the major factors in determining agricultural land values. Therefore, if land values are relatively high because of productivity and location, it will be necessary to utilize these lands in such a way that the returns per dollar of value will also be relatively high. The fact that high land values result from high productivity makes it necessary, for example, in the irrigated areas of Alberta, for individual producers to specialize in crops which yield a high return per acre.

The availability of processing plants may also influence the type of farming in an area. Such plants as cheese factories, creameries, concentrated milk plants or canning factories located in an area will encourage production for these plants in the immediate vicinity. Of course, it is probable that these plants will be found chiefly in areas particularly adapted for the raising of the product to be processed. Another factor of a somewhat similar nature is the presence or absence of co-operative organizations in a particular area. Such organizations often foster the production of certain commodities and may render the production and marketing of these commodities more economical than other enterprises.

The question of transportation as a factor in determining types of farming has been discussed along with the availability of markets, with emphasis being placed on the necessity of rapid transportation in connection with perishable products. The cost of transportation is also a factor which may influence areas of production. Certain bulky products cannot be shipped economically over long distances because the cost of transportation is too high in relation to their value. This factor is of particular importance in determining in a general way the economic soundness of producing in widely divided areas such as Eastern or Western Canada certain commodities in excess of local requirements. For example, hay for Ontario urban markets will likely be produced in Ontario rather than in the Maritime Provinces.

The type of land tenure in any area may have some influence on the type of farming carried on. This is not a particularly important factor in Canada where the percentage of tenant-operated farms is relatively small as compared with those operated by owners. Where the tenant is not restricted by the lease in the type of farming he must carry on, it is possible that tenant farmers would tend towards a type of farming with a high cash return and would not have the long-time outlook of the owner-operator.

On individual farms, the type of farming may be limited to some extent by the amount of capital available to carry on farm operations. Some types of agriculture require a relatively high investment and these types are limited to those who can finance them. Individuals, too, may organize their farm business according to their particular likes and dislikes, regardless of the most adaptable type of farming for the area.

The cost and availability of labour is a further factor which influences the pattern. Labour is drawn away from the farms by higher wages, and probably more congenial conditions of employment, offered by other industries, causing the farmer to turn to mechanization with its greater demand on capital investment. On the other hand, a nearby urban centre may provide seasonal and casual labour which is required in large quantity for the growing and harvesting of such crops as fruits and vegetables.

Changes in the relative prices of the different agricultural commodities may have an effect on the type of farming in any area, particularly in short-time programs on farms. This is shown in the cyclical fluctuations which take place in the production of certain commodities, chiefly livestock, in response to price changes. Any extended period of relatively high prices, such as the high price of wheat in wartime, will result in an expansion of acreage in those areas of marginal production. Similarly, low prices over a period of years will result in a contraction of acreage and consequent change in land use and type of farming.

Aside from the economic factors affecting agriculture there is also the influence of technological and biological changes. From the technological standpoint the introduction of a highly mechanized agriculture, especially in Western Canada, has had the effect of lowering costs of production of grain crops and has made possible a more extensive type of farming with a given labour supply. Biological changes, such as the introduction of new varieties of grains which require a shorter growing season or are resistant to certain diseases, have made it possible to change the type of farming in some areas. This factor has been of particular importance in driving back the fringe of settlement in the more northerly districts of the Prairie Provinces.

### PRODUCTION OF PRINCIPAL AGRICULTURAL PRODUCTS

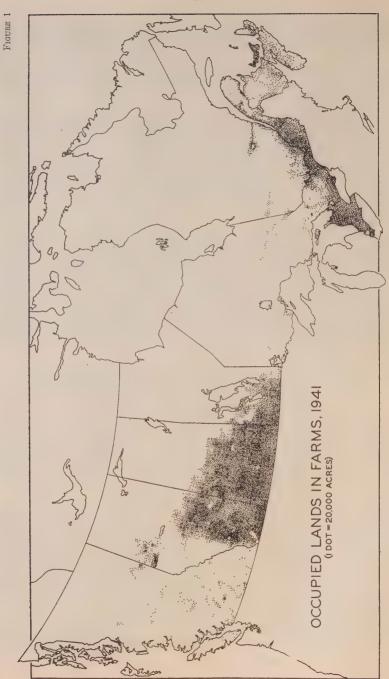
### The Use of Land Resources in Canada

While nearly all lines of economic activity are dependent upon land resources, none is so dependent on this factor as agriculture. This can be fully appreciated when it is realized that land in a technical sense includes the soil, its surface and topographical features, the subsoil and deposits underneath, as well as the climate. Land and its attributes furnish the facilities for the growth of plants which in turn become food for humans or livestock.

The land area of Canada, exclusive of the Yukon and the Northwest Territories, is 1,282,124,160 acres or approximately 2,003,319 square miles. Including the Yukon and the Northwest Territories, Canada is nearly equal to the area of the United States or the whole of Europe. About 229.9 million acres or 17.9 per cent of Canada's land area is located in British Columbia; about 452.2 millions or 35.3 per cent in the Prairie Provinces; approximately 567.8 millions or 44.3 per cent in Ontario and Quebec; and slightly more than 32.2 million acres or 2.5 per cent in the Maritime Provinces.

The settled areas of Canada lie close to the International Boundary. One-half of the population lives within 100 miles of the United States boundary and

<sup>1</sup> Canada Year Book 1943-44, page 11.



about 90 per cent within 200 miles. This strip of settled area is not continuous as it is broken up into various segments by wide rocky stretches, making each distinctive in its agricultural potentialities.

In 1941, 173,563,282 acres of land were classed as occupied farm lands. This was 13·5 per cent of the land area of the nine provinces. Expressed as a percentage of Canada's occupied farm land, 2·3 per cent was in British Columbia; 69·2 per cent in the Prairie Provinces; 23·3 per cent in Ontario and Quebec; and 5·2 per cent in the Maritime Provinces (Figure 1).

After a period of relatively slow growth before the turn of the century, improved land acreage expanded rapidly until 1920. In 1921 it was 70·8 million acres, which was more than double the 1901 figure. During the 1921-1931 period the rate of expansion was arrested as prairie settlement had almost reached its limits. Since that time settlement in the northern area of the Prairie Provinces has added to the total but since it consisted partly of a migration from vacated areas in the southern section, the rate of expansion was low. In 1941, the improved acreage stood at 91·6 million acres. In the regions of Canada other than the Prairie Provinces, improved acreage expansion reached its limits in 1921 and from then on to the present has remained comparatively constant.

About three-fifths of the improved land is devoted to field crops, one-quarter to summerfallow, one-tenth to improved pasture and the balance to orchards and vineyards, small fruits, market gardens and farmsteads.

The variation in intensity of land use in different parts of Canada, as measured by the number of productive man-work units of labour per acre occupied, is shown in Figure 2. This variation in intensity of farming is a reflection of differences in types of farming.

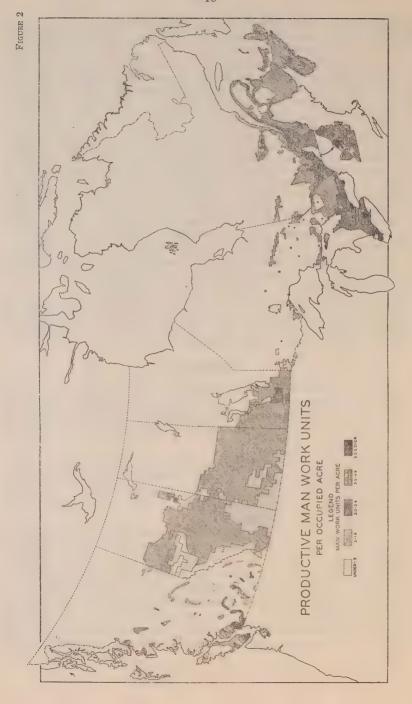
### Field Crops

The area devoted to field crops in Canada in 1941 was approximately 55.8 million acres. One per cent was found in British Columbia; 69 per cent in the Prairie Provinces; 16 per cent in Ontario; 11 per cent in Quebec; and 3 per cent in the Maritime Provinces. About 57 per cent was in the provinces of Saskatchewan and Alberta.

Wheat.—Wheat occupies the dominant place in the agricultural economy of Canada. No other product can compare with wheat in its influence upon the life of the Dominion and nothing has attracted so much attention from the outside world. Nearly two-fifths of the field crops area of Canada in 1941 was devoted to wheat production.

The role of wheat as the main cereal crop in Canada and the most important agricultural item entering into world trade is a story which is interwoven with the development of the West. The expansion of wheat acreage has been directly associated with the improvement of land in the Prairie Provinces. In 1881, only 2·4 million acres were planted to wheat. Acreage increased at a relatively slow rate until 1914 when 10·3 million acres were planted. During the period of the first world war, however, the greatest expansion took place. In 1919, the wheat acreage was 19·1 million, nearly double the acreage in 1914. Since that date, some expansion has taken place. Generally the area has ranged

<sup>1</sup> For explanation of 'productive man-work units', see footnote page 56.



from 22 to 25 million acres although there have been years (1940—28·7 million, for example) when this was exceeded. In 1941, the wheat acreage was 21,949,523 acres.

The distribution of wheat acreage throughout Canada is confined largely to the Prairie Provinces (Figure 3). In 1941, 96·7 per cent was located there with 55·6 per cent in Saskatchewan and 29·9 per cent in Alberta. Outside of these areas wheat is of greatest relative importance in Ontario and British Columbia.

Due to the adaptability of wheat to the soil and climatic conditions in Western Canada, it occupies the greatest percentage of the field crops area there. Taking 1941 as an example, wheat acreage was two-fifths of the field crops area in Manitoba, more than one-half in Alberta and about three-fifths in Saskatchewan.

Most of the wheat produced in Canada is of the hard red spring wheat type. During the early stages of Canada's development, when wheat was grown principally in Ontario, both spring and fall types were produced. Since the development of the West, however, fall wheat acreage has decreased and in 1941 was 611,450 acres. This crop is produced mainly in Ontario, although a moderate amount is grown in southern Alberta. Some wheat of the durum type is grown in Canada, principally in Manitoba and southeastern Saskatchewan; the area amounted to only 236,652 acres in 1941.

Outs.—The second most important cereal in Canada is outs. In 1941, approximately 12·3 million acres were devoted to its production. This was 22·0 per cent of the field crop area as compared with 39·3 per cent for wheat. Due to the popular use of outs as a feed grain, the acreage has always been relatively high. In 1910, 8·6 million acres were planted to outs. A relatively large expansion took place between 1910 and 1920 during which period there was an increase of 5·3 million acres. Until 1925 acreage was at the 14 to 16 million acres level<sup>1</sup>, but since that time a relatively constant acreage of approximately 13 million has been maintained.

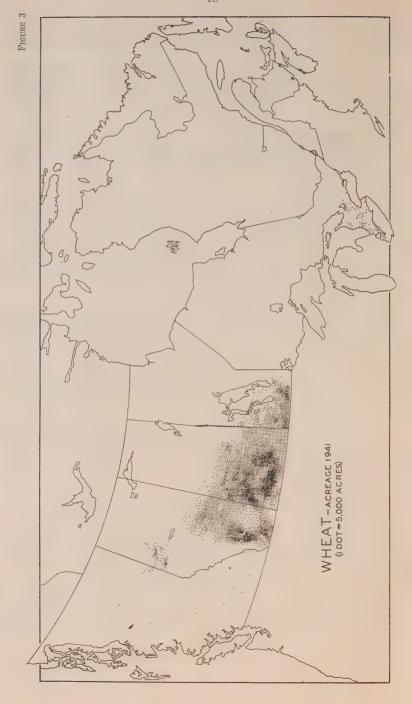
As a percentage of total field crops, oats is of highest relative importance in Quebec, Ontario and Prince Edward Island. The regional pattern of oats acreage indicates 0.8 per cent in British Columbia; 66.8 per cent in the Prairie Provinces; 16.3 per cent in Ontario; 12.9 per cent in Quebec; and 3.2 per cent in the Maritime Provinces (Figure 4).

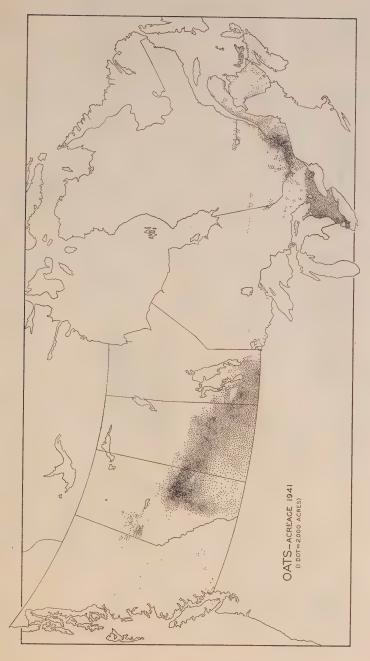
As in the case of wheat, the principal oat growing areas in Canada have gradually shifted to the Western Provinces since the turn of the century.

Barley.—Because barley is an important feedstuff in the hog ration, its acreage has increased in certain and quite well defined areas of Canada. Barley in 1941 at 5,311,508 acres was 9.5 per cent of the total area in field crops and much below the acreage of oats. In addition to its use as a feedstuff for hogs, the demand for barley for malting purposes is of some importance.

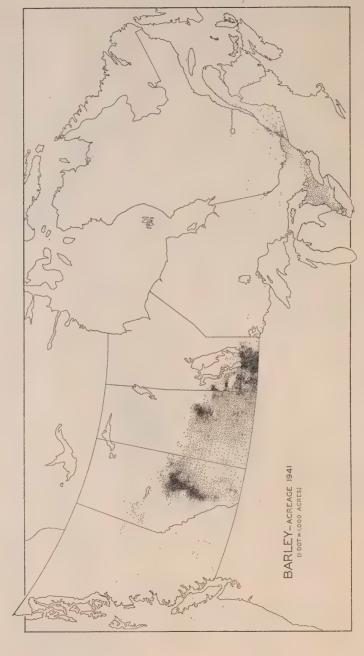
In 1890 about 881,000 acres were grown with the major percentage in Ontario and important proportions in Quebec and Manitoba. At that time barley was not an important crop in the Maritimes and even at the present time it has not assumed a prominent place.

<sup>&</sup>lt;sup>1</sup> Acreage, Production and Value of Grain Crops in Canada 1908-1946, Agricultural Division, Dominion Bureau of Statistics, June 1947.









Gradual and quite consistent increases in acreage as well as in the relative importance of this crop have been attained in Canada. In 1920, approximately 2·0 million acres of barley were grown with about 74 per cent of this area in the Prairie Provinces and nearly two-fifths in Manitoba. By 1930 the acreage had increased to 4·9 million, with 87 per cent in the Prairie Provinces. This was the period of great expansion for the barley crop.

The shift of the barley acreage to the Prairie Provinces has continued and, in 1941, 90·0 per cent was grown there as compared with 0·3 per cent in British Columbia; 6·7 per cent in Ontario; 2·2 per cent in Quebec and 0·8 per cent in the Maritime Provinces.

The principal areas of concentration, as indicated in the accompanying dot map (Figure 5), are in each of the Prairie Provinces. In Alberta the main area extends from Calgary to Edmonton; in Saskatchewan barley concentration is in the Humbolt to Melfort to Nipawin area; while in Manitoba the principal areas are in the Carman, Portage la Prairie and Winnipeg districts.

**Hay.**—Cultivated hay acreage is 18.6 per cent of the area of field crops and is only slightly less than that of oats. In 1941 approximately 10.4 million acres of hay crops were grown.

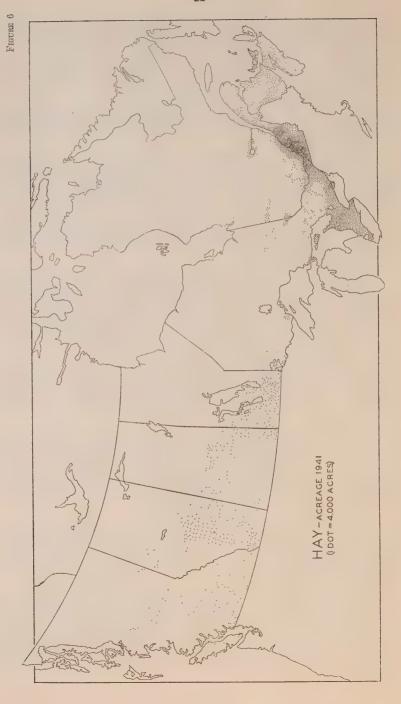
The inclusion of hay crops in the crop rotation indicates a stage of development associated with a permanent type of agriculture. It also indicates an association with major enterprises in order to supplement or complement the farm returns, as hay is usually associated with livestock production. In maintaining and preserving agricultural resources, cultivated hay crops are of considerable value. As a means of preventing undue soil depletion and erosion hay crops are being used more regularly where climatic conditions permit.

The relative importance of cultivated hay as related to the field crop area in 1941 was 76 per cent in Nova Scotia; 66 and 62 per cent in New Brunswick and Quebec; 49, 48 and 41 per cent in Prince Edward Island, British Columbia and Ontario; and only 6, 5 and 2 per cent in Manitoba, Alberta and Saskatchewan respectively (Figure 6).

In terms of total acreage for the Dominion a gradual increase has taken place. In 1890, 6·2 million acres of cultivated hay were reported. This increased to 8·8 million in 1911. The distribution of the crop has changed somewhat since the early days of settlement when the largest acreage was found in Ontario and Quebec. In 1941, however, over 72 per cent was still found in these provinces as compared with 2·5 per cent in British Columbia, 13·9 per cent in the Prairie Provinces and 11·5 per cent in the Maritime Provinces.

In Ontario and other sections of Eastern Canada, timothy and clover are still the most popular cultivated hay crops although alfalfa has increased in importance. In the Prairie Provinces, crested wheat grass, slender wheat grass, brome and sweet clover had the largest acreage in 1941, and grain cereal hay was an important source of feed. Alfalfa is an important hay crop in the irrigated areas of Alberta and the northeastern section of Saskatchewan.

Flax.—Flaxseed has been grown almost exclusively in the Prairie Provinces and largely in Saskatchewan. The acreage in flax has shown wide fluctuations. The largest increase coincided with the opening of the West. Acreage jumped from 23,086 in 1900 to 1,351,105 in 1911. In 1921 and 1931 the acreage was 463,599 and 648,100 acres respectively. In 1941 the acreage was relatively high



at 1,008,377 acres. Due to the great demand for linseed during the second world war, the acreage in flax increased greatly. In 1943 the total acreage in flax was 2,948,000 acres. The average for the 1944-46 period was 1,074,000 acres as compared with 454,500 from 1927-30 and 321,650 acres in 1936-40, an immediate pre-war period.<sup>1</sup>

Flax is also used for fibre purposes. Pre-war average acreage ranged from 5,000 to 8,000 acres for all of Canada, while during the 1940-46 period fibre flax ranged from 20,000 to 47,000 acres.<sup>2</sup> The major fibre flax producing areas are in the St. Lawrence lowlands of Quebec and Ontario. Specifically these are in the counties of Glengarry, Prescott, Russell and Carleton in Ontario and the counties of Soulanges and Vaudreuil of Quebec. In Western Canada small acreages are found in Manitoba in the vicinity of Winnipeg and Portage la Prairie.

Rye.—The acreage of rye in 1941 was 928,711 acres which indicated a comparatively high point in the trend of rye production. In 1911 there were 132,928 acres of rye in Canada, the bulk of which was in Ontario. By 1921, there were 774,561 acres with about 85 per cent located in Alberta, Saskatchewan and Manitoba. At the time of the census in 1941, more than 90 per cent was in the Prairie Provinces. The only other province where rye is grown to any significant extent is Ontario (Figure 7).

The bulk of rye grown is planted in the fall although sizeable amounts of spring rye are also grown.

The important areas of rye production are situated generally on light sand and sandy loam soils. Not only is rye suited to these soils and permits greater distribution of labour as it may be seeded in the fall, but it is of considerable value in preventing wind erosion and soil depletion. In Saskatchewan, rye production is becoming more general in parkland areas in addition to the drier areas of the southwestern part of the province.

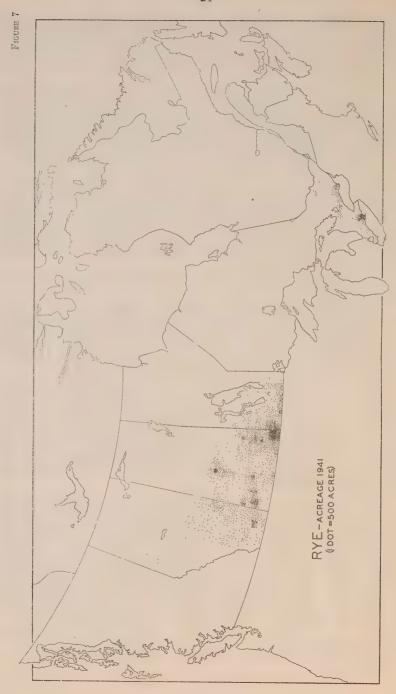
Mixed Grains.—The practice of growing two or more grains together for livestock feed is followed by many farmers, especially in Ontario. Oats and barley form the most popular mixture, although peas are also frequently grown with oats. The acreage reported for mixed grains has not changed significantly since 1931 and in 1941 was 1,436,207 acres.<sup>3</sup> Approximately 80 per cent is located in Ontario and 12 per cent in Quebec. Since 1931, increases have been reported for Prince Edward Island, Quebec and Alberta. Only minor changes are reported for the other provinces.

Corn.—Corn is a crop which requires a long growing season and consequently is not extensively grown for grain production in Canada except in relatively small areas in southwestern Ontario and southern Manitoba. The acreage of corn grown for fodder in Canada in 1941 was 409,081 acres, about 72 per cent of which was grown in Ontario, 15 per cent in Quebec and 9 per cent in Manitoba. Corn for husking amounted to 341,488 acres in 1941 with 250,984 acres being grown in Ontario and an additional 76,906 acres in Manitoba. These are both appreciable increases as compared with 1931. In Ontario, corn for husking is grown mainly in the counties of Essex and Kent while in Manitoba areas of greatest concentration are around Carman, Morden and Emerson.

<sup>2</sup> Quarterly Bulletins of Agricultural Statistics, Dominion Bureau of Statistics.

8 Mixed or other grain.

<sup>&</sup>lt;sup>1</sup> Acreage, Production and Value of Grain Crops in Canada, 1908-1946, Agricultural Division, Dominion Bureau of Statistics, June 1947.



Buckwheat.—Buckwheat has decreased in acreage and in relative importance in all parts of the Dominion, especially in Ontario where the acreage dropped from 187,619 in 1931 to 115,947 in 1941. Two periods, 1910-1911 and 1930, stand out as the peaks in buckwheat production in Canada. However, the 208,759 acres of this crop grown in 1941 were fewer than at any time since 1890.

Sugar Beets and Mangolds.—In 1941, 31,103 acres were devoted to sugar beets for sugar, while 69,081 acres of sugar beets and mangolds were grown for feed purposes.

A gradual increase in sugar beet acreage has taken place during recent years. Approximately 42 per cent of the sugar beets used for sugar in 1941 was produced in Ontario, 34 per cent in Alberta, and 24 per cent in Manitoba. Production was concentrated largely in the counties of Kent, Lambton, Essex, Middlesex, Huron and Elgin, in Ontario; in the irrigated areas around Raymond, Lethbridge and Taber in Alberta; and in an area southwest from Winnipeg in Manitoba. Of the total acreage of mangolds and sugar beets used for feed 69 per cent was in Ontario; 13 per cent in the Maritimes; and 10 per cent in Quebec.

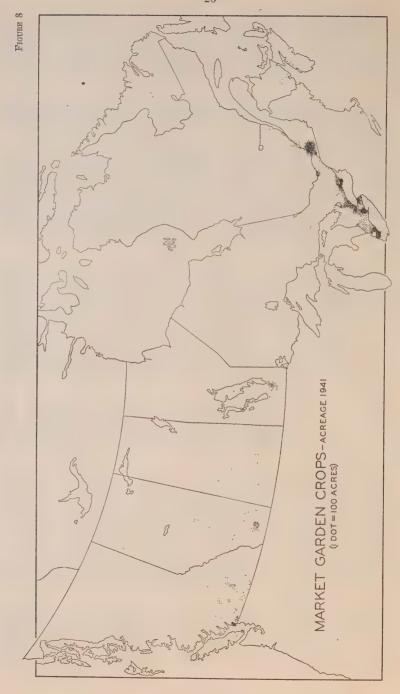
Tobacco.—The acreage of tobacco in Canada has increased continually and in 1941 reached a total of 71,872 acres. This amount was 48 per cent more than that reported in 1930 and 23 per cent more than the 1931 acreage. The major increase took place in Ontario. Tobacco is grown mainly in southern Ontario and is largely of the flue cured and burley types, with smaller acreages of cigar and dark tobaccos. The counties of Norfolk, Essex, Elgin, Oxford and Kent are the main centres of production. In Quebec, cigar, pipe and flue cured tobaccos are also grown, flue cured burley and cigar types being most important. Counties in Quebec where tobacco is of some importance are Joliette, Montcalm, L'Assomption, Berthier and Rouville.

Beans.—The only areas of Canada where field beans are an important cash crop are the counties of Kent, Huron, Elgin and Middlesex in Ontario. The acreage of this crop increased from 90,045 acres in 1930 to 108,152 acres in 1941 and mainly in the above mentioned counties. This acreage includes 12,903 acres of soybeans.

**Peas.**—The main field pea producing areas are also in Ontario and these accounted for 59 per cent of the acreage reported in Canada in 1941. Total area in field peas in Canada in 1941 was 71,181 acres which was only slightly less than that in 1931. This acreage is only a very small proportion of the 670,320 acres reported in 1900. The main pea producing counties in Ontario are Renfrew, Simcoe, Grey, Bruce and Durham, which are widely separated.

In Alberta, peas are an important crop in the irrigated areas. In 1941, 5,893 acres were planted. In Saskatchewan the acreage has increased in some districts of the northeastern section since 1941.

Turnips.—About 43 per cent of the turnip acreage is found in Ontario. The counties of Wellington, Waterloo and Oxford, Ontario, York, Simcoe, Huron and Bruce recorded the largest areas in 1941. An additional 28 per cent was grown in Quebec and 26 per cent in the Maritime Provinces. Turnips and swedes are important as livestock feed but some types are used for human



consumption and are an important source of income. The acreage of turnips and other field roots in Canada has declined consistently since 1890. In 1941, the total area in turnips and swedes in Canada was 96,412 acres.

Vegetables.—There are very few farms in Canada which do not have a vegetable garden of sufficient size to provide for summer and at least part of the winter needs. However, there are certain sections of the Dominion, principally adjoining the larger urban centres, where the commercial production of vegetables is important (Figure 8).

Over half of the 118,844 acres used for the production of these crops in 1940 were in Ontario while approximately one-quarter were in Quebec. In addition to these central provinces, other important areas were in British Columbia, Alberta and Manitoba.

In Ontario and Quebec, mainly in the counties of Essex, Prince Edward, Kent and Norfolk, and in the counties adjacent to the city of Montreal, tomatoes, sweet corn and green peas are the most important crops. In British Columbia, tomatoes, green peas, onions, sweet corn and carrots are the principal crops and are grown mainly in the Okanagan and Lower Fraser valleys. There is about an equal acreage in vegetables in Alberta and Manitoba. In Alberta, sweet corn and green peas are the main crops and are grown largely in the irrigated sections. In Manitoba, vegetable crops are more diversified, the main ones being onions, cabbage, sweet corn and green peas. These are grown mainly around Winnipeg.

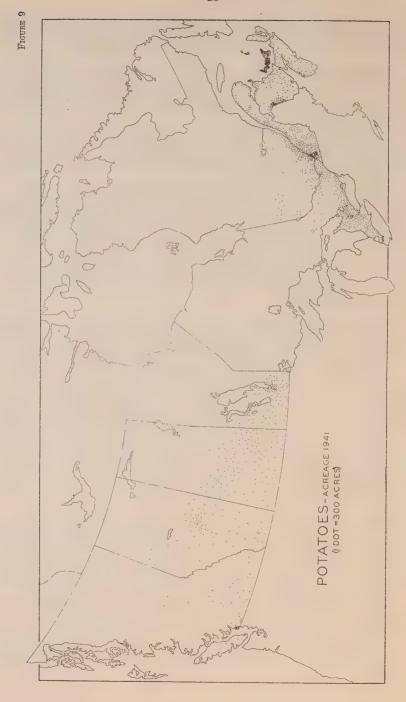
**Potatoes.**—Potatoes are in a similar position to vegetables and are grown on practically all farms. Commercial production is found in areas which are especially suited on account of location, soil and climate features (Figure 9).

In 1940, 503,875 acres of potatoes were grown in Canada, about 56 per cent of which was in Ontario and Quebec. This acreage is less than in 1930 but substantially the same as has prevailed for a number of years. Potatoes are the most important cash crop in the province of Prince Edward Island. The upper Saint John Valley of New Brunswick is also well adapted to potatoes and is developed as a commercial producing area. In Quebec, potatoes are widely grown throughout the province, especially around Montreal and in the Gaspé peninsula. In Ontario, large areas are concentrated in the counties north and west of Toronto. In Western Canada relatively important potato areas are found in the Kildonan and north Winnipeg sections of Manitoba and the Delta area of the Lower Fraser Valley in British Columbia.

Fruits.—Canada produces, in commercial quantities, apples, apricots, pears, peaches, plums, cherries, grapes, strawberries, raspberries, blackberries, currants, gooseberries, cranberries, loganberries and blueberries. Climatic conditions limit the production of fruits largely to the areas of long growing seasons and in the case of the more tender fruits to areas such as the Niagara peninsula in Ontario and the Okanagan and Lower Fraser Valley in British Columbia.

The area devoted to orchards and vineyards in 1941 was 195,454 acres. Approximately half of this area was in Ontario, about one-fifth in Nova Scotia, one-fifth in British Columbia, and one-tenth in Quebec (Figure 10).

The temperate climate demanded for production of tree fruits greatly limits the areas of commercial production. The main areas are the Annapolis Valley 38194—5



of Nova Scotia, the Gagetown district of New Brunswick, and Rouville area of Quebec, the Niagara peninsula and north shores of Lakes Ontario and Erie in Ontario, and the Okanagan and other interior valley areas of British Columbia.

Prior to 1916 the apple industry was largely centered in Ontario and Nova Scotia and to some extent in New Brunswick and Quebec. In 1940, British Columbia had outstripped all other provinces in actual production; Nova Scotia was second, Ontario was third, while Quebec and New Brunswick followed in that order.

The peach crop occupied 20,410 acres in 1941 compared with the apple acreage of 131,998. Peaches were grown to a considerable extent in Niagara peninsula of southern Ontario and also in British Columbia.

Pears occupied 9,444 acres, of which 6,108 were in Ontario, 2,852 in British Columbia and only 451 in Nova Scotia. Plums are grown in each province but are largely concentrated in Ontario and British Columbia, as are cherries.

Commercial production of fruits other than tree fruits occurs largely in Ontario, followed by British Columbia. Some small fruits are produced for home use in almost all parts of Canada.

### Livestock

The production of livestock and livestock products occupied a position of importance in 1941 nearly equal to that of field crops. Livestock and livestock products constituted about 45 per cent of the total gross value of agricultural production in Canada as compared with 47 per cent for field crops. Farm animals grossed 335.9 million dollars or 24 per cent, while livestock products, including wool, milk production, poultry and eggs, made up 286.2 millions dollars or 21 per cent.

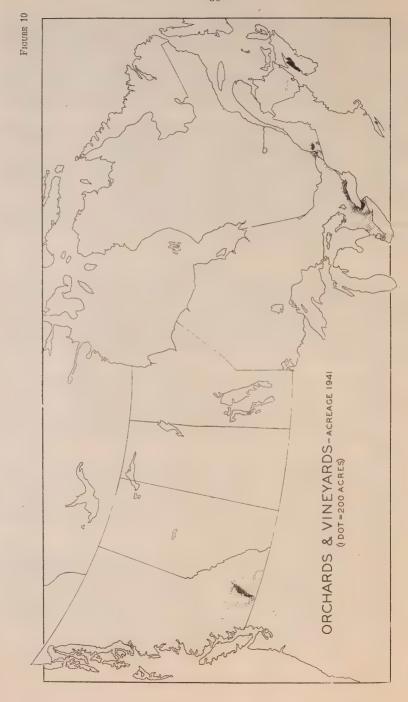
Livestock and livestock products have formed an increasingly important part of agricultural production in relation to grains. In 1926, livestock made up 29 per cent of the gross value of agricultural production as compared with 40 per cent in 1931 and 36 per cent in 1936. On the other hand, the gross value of field crops decreased from 67 per cent in 1926, to 52 per cent in 1931 and 57 per cent in 1936<sup>2</sup>.

Livestock production has been maintained largely for the home market and with increases in Canada's population the demand for livestock products has increased. With the advent of refrigeration and dehydration, it has been possible to share in overseas markets. In addition to this factor, greater industrialization and urbanization and rising income levels increased the relative demand for livestock products as compared with grains.

While considerable income flexibility still exists with respect to livestock production, the above developments have not only strengthened the domestic market but have made possible an expansion in export trade. The possibilities of increasing livestock production and supplying overseas countries was well exemplified during the second Great War with respect to bacon, cheese, butter and eggs. Modern advances in processing, packaging, refrigeration and dehydration have been extremely important marketing developments.

Quarterly Bulletin of Agricultural Statistics. Dominion Bureau of Statistics. January-March 1942.

<sup>38194-57</sup> 



Cattle.—The total number of cattle reported on farms in the 1941 census was 8,517,300 head. About 42 per cent were classed as milk cows. Cattle numbers in 1941 were about 7 per cent higher than in 1931, only slightly more than in 1921 and about 30 per cent more than in 1911.

Livestock inventories are characterized by cyclical fluctuations. Milk cow numbers reached a peak in 1926 and again in the middle thirties. Other cattle, mainly beef animals, reached a peak in numbers immediately after the first World War and again in 1933.

The distribution of cattle in Canada is the widest of any class of livestock. Approximately four-fifths of all occupied farms reported cattle in 1941. This distribution is closely linked with the purpose or use of cattle. The association with the home market and the utilization of beef and dairy products in the average Canadian farm household affect the general distribution.

In 1941, about 4 per cent of the cattle were found in British Columbia; 39 per cent in the Prairie Provinces; 31 per cent in Ontario; 20 per cent in Quebec; and 6 per cent in the Maritime Provinces. The regional distribution of Canada's total cattle population indicates a decline in the Maritime Provinces and increases in the Prairie Provinces and British Columbia over a period of years.

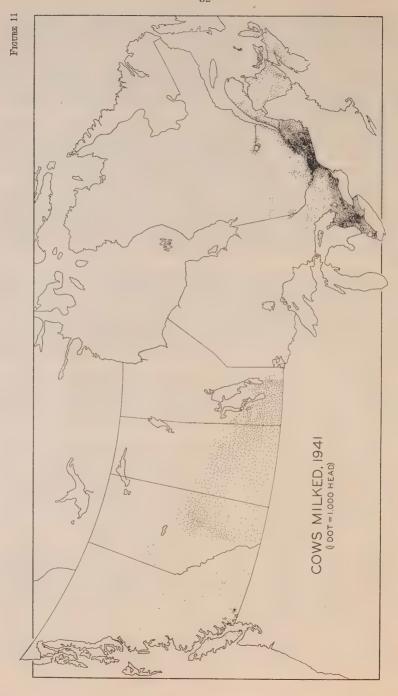
It is difficult to determine from available figures the utilization of cattle for beef or for milk purposes. There is considerable overlapping of the two types. This is evident in prairie and parkland sections of Western Canada, where cattle are kept for a dual purpose. In such cases, often only a moderate-sized herd of cattle is kept. During periods of good pasture conditions, surplus milk is produced and a common practice is to ship one or two cans of cream per week to the creamery. A few head of cattle are available for sale on the average western farm under these conditions.

In Eastern Canada this condition exists to a more limited extent. Due to the greater urban population there is a tendency for farms to specialize in dairying, fluid milk being produced near centres of population. Farms which are farther away from such urban centres produce milk for processing and may use dairy or dual-purpose breeds.

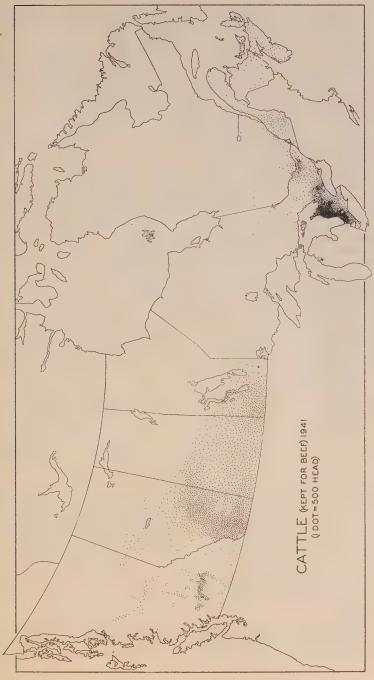
The dot map for cows milked in 1941 shows a high concentration in southern Ontario and in the southern parts of Quebec (Figure 11). In Ontario, areas of greatest concentration were the counties of Oxford, Middlesex and the eastern counties. In Quebec, cows milked in 1941 were concentrated in the area from the Ottawa River to Montreal, around Howick, Huntingdon and Ormstewn and in the Eastern Townships around Sherbrooke. In the Prairie Provinces a much lower degree of concentration can be noted in the parkland areas. The Lower Fraser Valley is the main dairy area of British Columbia.

The accompanying dot map for cattle kept for beef indicates the generally wide distribution in Canada (Figure 12). Areas of greatest concentration are the southwestern section of Ontario adjoining Lake Huron and Georgian Bay, the eastern part of Ontario, southern Manitoba, the parkland section of Alberta, the Foothills ranching area of the same province and the inter-mountain valleys or ranching sections of British Columbia.

**Swine.**—There has been a decided increase in the swine population in Canada. The 1941 census reported  $6\cdot 1$  million head as compared with  $4\cdot 7$  million in 1931,  $3\cdot 3$  million in 1921 and  $1\cdot 7$  million in 1891. About two-thirds







of the occupied farms in Canada reported having swine in 1941. Exceptions were in British Columbia, where only about one-third reported swine, and in Nova Scotia, where approximately one-half had swine.

Swine inventories, in common with other classes of livestock, move in cyclical fluctuations. The swine cycle has a duration of about four to five years. The length of cycle is associated with the length of time required to increase or decrease production. Relatively high peaks of production occurred in 1927, 1931 and 1936. Wartime feed grain policies and the British bacon agreements have modified the normal cyclical trend.

During the early years of development of the swine industry in Canada, the lard type of hog was dominant. In recent years the bacon type has almost supplanted the fat hog.

Hogs represent an entirely different type of meat production as compared with beef cattle. The raising of hogs offers an alternative method of marketing feed grains. The extent of hog production depends upon the comparative profitableness of marketing barley or oats or of feeding it to hogs. Because of the relatively short period required to produce hogs for market, temporary economic conditions have a greater effect in influencing hog production than on beef cattle production. In hog production, prospects at the time of making plans for farrowing of sows are extremely important. Aside from the consideration with respect to comparative prices of feed grain and pork, the availability and cost of labour has an important effect.

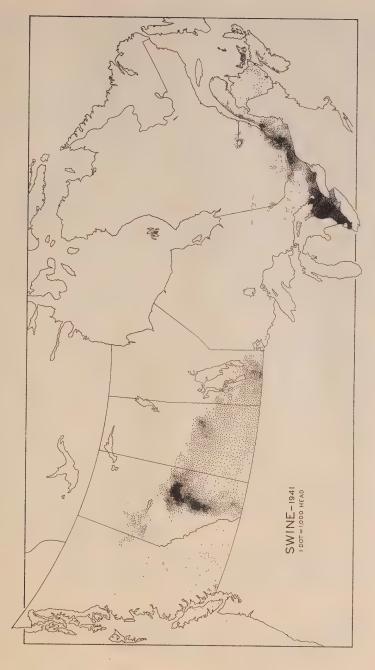
The regional distribution of swine in 1941 also indicates a shift in production to the Prairie Provinces. In that year about 1 per cent was found in British Columbia; 52 per cent in the Prairie Provinces; 31 per cent in Ontario; 13 per cent in Quebec; and 3 per cent in the Maritime Provinces. Twenty years prior, in 1921, 1 per cent was also found in British Columbia; 31 per cent in the Prairie Provinces; 42 per cent in Ontario; 21 per cent in Quebec; and 5 per cent in the Maritimes.

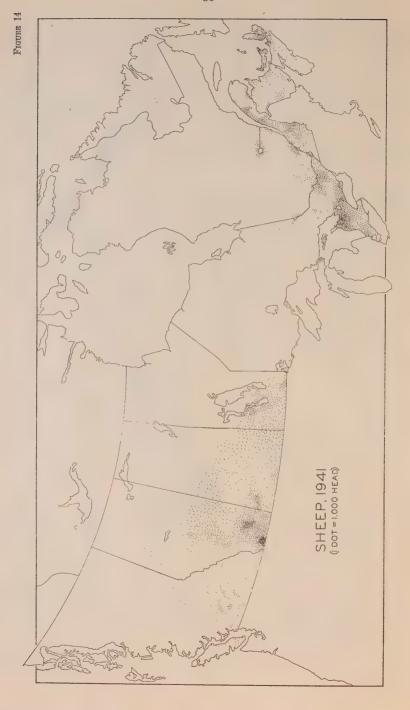
The geographical distribution of the swine population in 1941 is shown in Figure 13. In nearly all parts of Ontario and Quebec, hog raising is an important part of the farm business. In the Prairie Provinces, while hogs are found to a limited extent on nearly all farms, herds of commercial significance are usually found in areas where coarse grains (barley and oats) occupy a larger percentage of the cropland than wheat. On account of this association, hogs are concentrated in the parkland areas of these provinces.

Sheep.—The sheep population has been relatively irregular and in 1941, 2,839,948 were reported on Canadian farms. The 1941 figure represented a low point in sheep production. During the last twenty years sheep inventories were lower only in the 1923-26 period. In addition to the factor of the price of mutton in influencing sheep numbers, the price of wool has some effect.

Of the three important classes of productive livestock, sheep were reported on the fewest farms in 1941. For Canada as a whole about 16 per cent of the occupied farms reported sheep. The proportion of the farms reporting sheep was about one-third in Quebec, one-quarter in the Maritimes and one-seventh in Ontario, while in the Prairie Provinces sheep were raised on only one farm in twelve.

A decided shift in the distribution of the sheep population of Canada is apparent by an examination of census information. In 1921, about 2 per cent were found in British Columbia; 23 per cent in the Prairie Provinces; 57 per cent





in Ontario and Quebec; and 18 per cent in the Maritime Provinces. The percentage distribution by provinces for 1931 and 1941 indicates relatively more sheep in British Columbia and the Prairie Provinces and relatively less in Ontario, Quebec and the Maritime Provinces. In 1941, 4 per cent were in British Columbia; 44 per cent in the Prairie Provinces; 42 per cent in Ontario and Quebec; and 10 per cent in the Maritimes. About one-half of the sheep population in 1941 was found in the provinces of Alberta and Ontario (Figure 14).

In British Columbia, Alberta and Saskatchewan, sheep are usually found on relatively large ranch units. In the grazing areas, sheep and cattle and often horses are found on the ranch. Invariably sheep are of the hardy, fine wool type and are kept on the range for the greater part of the year. Fine-wool types are also dominant in the inter-mountain valley and plateau areas of British Columbia. In Manitoba, sheep are kept under general farm conditions and in enclosed areas, mutton types being predominant.

In Eastern Canada, the mutton-producing types are more common than in Western Canada. Areas of greatest concentration in Ontario are in the Georgian Bay section; in other northern counties of southwestern Ontario; and in the counties of Lanark, Carleton and Renfrew near Ottawa. In Quebec, the concentration of sheep, on the basis of the 1941 census, was greatest in Three Rivers, Sherbrooke and the extreme southern and eastern counties bordering the St. Lawrence. In the Maritimes, the counties of Inverness and Antigonish, in the northern part of Nova Scotia, and the three counties of Prince Edward Island, are relatively important sheep producing areas.

Horses.—Horses are used primarily for work stock and, while they cannot be classed along with cattle, swine and sheep, as productive livestock, the livestock situation would not be complete without a reference to horses on farms.

On the basis of census reports, the horse population of Canada reached a peak of 3.6 million head in 1921. Since that time numbers have decreased in all sections of Canada, and in 1941 the number reported on farms was 2,788,795.

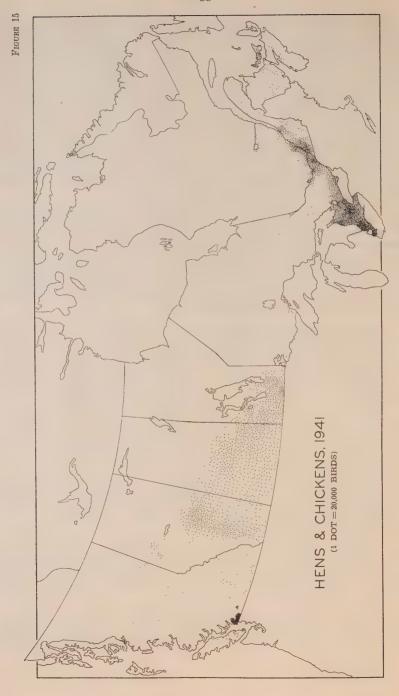
Mechanization of Canadian farms has been greatly facilitated by the advent of the general purpose tractor as a source of power. Only within the last fifteen years has the tractor supplanted the horse in a general way. Despite the change to tractors as a source of power, many farms in parts of each province use horses alone or in combination with a tractor.

Over three-quarters of all occupied farms in Canada reported horses in 1941. This was nearly equal to the proportion reporting cattle. Horses were reported on slightly more than half of the farms in British Columbia, approximately four-fifths in the Prairie Provinces, Ontario and Quebec, and about two-thirds in the Maritime Provinces.

About 2 per cent of the horse population was found in British Columbia, 63 per cent in the Prairie Provinces, 31 per cent in Ontario and Quebec, and 4 per cent in the Maritime Provinces. This is about the same regional distribution which has prevailed since the first large expansion in improved acreage in Western Canada.

**Poultry.**—In 1941, the total poultry population on farms was reported as approximately 63·53 million, of which 58·99 million were hens and chickens, 3·21 million turkeys, 1·27 million geese and ducks and ·06 million other kinds.

<sup>1</sup> Includes 158,742 horses kept in cities and towns.



Up to 1931 there was a steady increase in the hen and chicken population, which was only 12,696,701 in 1891. The peak in census years occurred in 1931 when 61,227,229 were reported.

In 1941 about 4 per cent of the hens and chickens were found in British Columbia, 40 per cent in the Prairie Provinces, 37 per cent in Ontario, 14 per cent in Quebec, and 5 per cent in the Maritime Provinces (Figure 15). For turkeys, the main other kind of poultry, a regional breakdown indicated 1 per cent in British Columbia, 70 per cent in the Prairie Provinces, 21 per cent in Ontario, 6 per cent in Quebec, and 2 per cent in the three Maritime Provinces.

The average size of farm flock of hens and chickens in 1941 was 103 in British Columbia, 79 in the Prairie Provinces, 122 in Ontario, 52 in Quebec, and 39 in the Maritimes.

Irrespective of the main type of production found on the farms of Canada, hens are kept on nearly all of them in sufficient numbers to supply the farm family with eggs and fowl. Poultry raising, however, assumes commercial importance on a relatively large number of farms in the Lower Fraser Valley and Howe Sound areas near Vancouver, in nearly all sections of southern Ontario, on farms near the cities of Montreal, Quebec and Three Rivers in Quebec and in the Annapolis Valley of Nova Scotia. In the Prairie Provinces, specialization in poultry production is not usual except near the larger urban centres and on a relatively small number of farms.

Fur-Bearing Animals.—Early development in raising fur-bearing animals in captivity took place first in Prince Edward Island, later in Quebec and then in Ontario and Nova Scotia. While foxes were the first to be raised in captivity on a commercial scale, many other kinds of fur-bearing animals are now being raised, such as mink, raccoon, skunk, marten, fisher and rabbit. The development of new colour phases in foxes and mink was an important incentive to the fur-farming industry. Mink are the most numerous followed by the various types of foxes. These far out-number all other kinds of fur-bearing animals.

There was a slow and steady increase in the number of farms where furbearing animals were raised until 1938 when 10,455 were reported. The period of growth from 1920 to 1938 was the most rapid. With the outbreak of hostilities and the loss of the London and European markets, prices declined and a considerable number of farmers raising fur-bearing animals went out of production. In 1941, there were 8,440 farms reporting fur-bearing animals and numbers have decreased further since that time.

The most intensive fur-farming areas are found in Prince Edward Island, Nova Scotia, New Brunswick, and Quebec.

A considerable development of fur farming has taken place in parts of Canada other than in the Eastern Provinces. A distribution of the 8,440 fur farms reported in 1941 showed 5 per cent in British Columbia, 26 per cent in the Prairie Provinces, 16 per cent in Ontario, 31 per cent in Quebec, and 22 per cent in the Maritime Provinces.<sup>2</sup>

**Bees.**—A total of 409.890 colonies and 28,190 beekeepers were reported in Canada in 1941<sup>3</sup>. Production of honey in that year was 27.5 million pounds. The

<sup>1</sup> Quarterly Bulletin of Agricultural Statistics. Dominion Bureau of Statistics. Jan.-Mar. 1941.
2 Report on the Fur Farms of Canada 1945, Dominion Bureau of Statistics.

<sup>3</sup> Quarterly Bulletin of Agricultural Statistics, January-March 1942, Dominion Bureau of Statistics.

index of production of 149·2 in 1941 (1924-25=100) indicates considerable development in beekeeping, a large proportion of which has taken place in Western Canada.

The regional distribution of colonies in 1941 showed about 5 per cent in British Columbia; 26 per cent in the Prairie Provinces, 49 per cent in Ontario, 19 per cent in Quebec, and 1 per cent in the Maritime Provinces.

Beekeeeping made the greatest development in the provinces of Saskatchewan and Alberta during the late thirties. Comparing the 1941 figures with the average of the 1934-38 period, the number of beekeepers increased by 51 and 118 per cent, respectively, in these provinces, while the number of colonies doubled. In Ontario, where production is largest, the number of beekeepers decreased by about 6 per cent while production remained about the same.

Commercial beekeeping has become a specialized business in some areas while, in general, the practice of keeping one or two colonies is associated with supplying only the needs of the farm family. In Ontario, beekeeping is concentrated near Georgian Bay and in counties near Toronto. In Manitoba, beekeeping is general in most sections except in the southwestern portion. In Saskatchewan, the parkland areas of the province, particularly in the northeast corner, are important honey producing areas. In Alberta, concentration is greatest in the irrigated areas and in the northern section surrounding Edmonton.

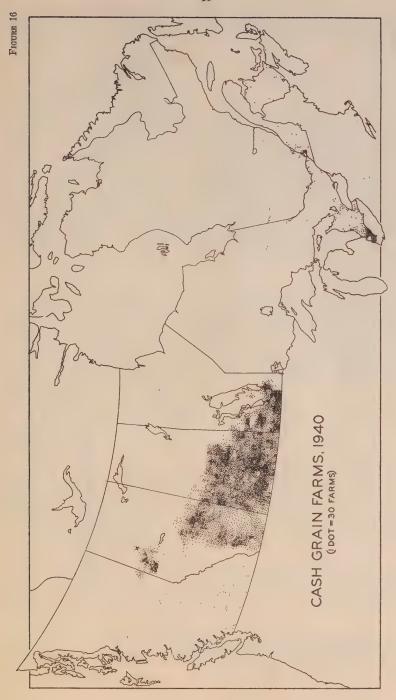
### GEOGRAPHICAL DISTRIBUTION OF FARM TYPES

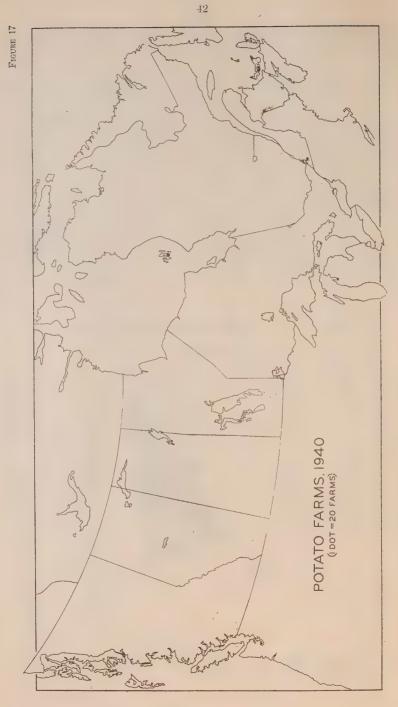
## Type of Farming Classification

The 1941 Census classified individual farms 1 by type, using as a basis the main source of revenue in 1940. The basis used for this classification was that 50 per cent or more of the gross revenue (including the total value of farm products sold, products used on the farm and outside income) should be obtained from one source, and that no second source should represent as much as 50 per cent of the main source. For purposes of this study those farms on which 50 per cent or more of the gross revenue was made up of the sale of farm products, were considered to be commercial farms; those on which the value of farm products consumed on the farm made up 50 per cent or more of the gross revenue were classified as self-sufficient farms; while farms on which income from non-farm sources made up 50 per cent or more of the gross revenue were classed as part-time farms. Commercial farms were further classified according to type of production as follows:

- (1) Grain and hay farms,
- (2) Crop specialty farms,
- (3) Fruit and vegetable farms,
- (4) Dairy farms,
- (5) Poultry farms,
- (6) Livestock farms,
- (7) Forest and apiary farms.

<sup>1</sup> For purposes of the Census of Canada, 1941, a farm is an area of land of one acre or more in extent, which produced in the year preceding the census, agricultural produce to the value of \$50 or more, or was in crops or used for pasture in the Census year.





Farms not falling into one of the main type groups were classified as combination of the main types. These combinations were grouped into five sub-types as follows:

- (a) Grain and hay combinations,
- (b) Livestock combinations,
- (c) Dairy combinations,
- (d) Self-sufficing combinations,
- (e) Other combinations (including part-time).

Where, however, 40 per cent of the gross revenue on a farm within one of the above groups, such as grain and hay farms, was derived exclusively from one product, for example wheat, that farm was classified as a wheat farm.

The accompanying dot maps indicate the distribution of some of the main types of farms. In interpreting the distribution of each of the farm types as shown on these maps, it should be understood that the location indicates only that the particular type considered is important in that locality, but is not necessarily found to the exclusion of other farm types. A comparison of these maps along with dot maps showing the distribution of the various products provides a basis for appraising the relative importance of each type of production.

### Commercial Farms

Cash Grain Farms.—Cash grain farms are found in all settled sections of the Prairie Provinces; in the Peace River block of Alberta and British Columbia; in the counties of Essex, Kent and Lambton in Ontario; and in the counties of Laprairie and Napierville in Quebec (Figure 16).

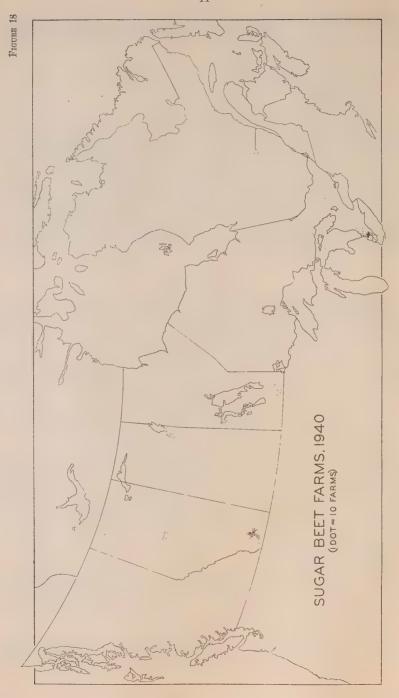
In Western Canada, wheat is the main kind of grain produced for sale in the open plains area, while oats and barley are of greater relative importance on the parkland Black soils and the Grey Wooded soils. Oats and barley occupy a more important position on the average farm in Manitoba and in sections of Alberta than in the major portion of Saskatchewan.

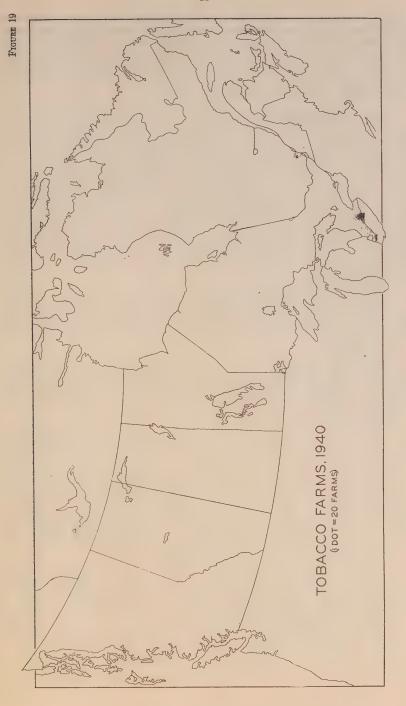
In the counties of Essex, Kent and Lambton in Ontario, corn, fall wheat and oats were the most important cash grain crops in 1940. In Quebec there are few cash grain farms, oats being the most important cereal crop.

Potato Farms.—Inspection of the dot map showing the location of specialized potato farms in Canada (Figure 17), indicates a relatively narrow and localized distribution. Potato farms, as such, are found in all sections of Prince Edward Island, the upper St. John Valley of New Brunswick and in the counties adjoining the city of Montreal. Other centres of minor importance as compared with these are the area north and west of Toronto and Essex county in Ontario, the Winnipeg and Kildonan area in Manitoba, and sections of the Lower Fraser Valley in British Columbia.

Sugar Beet Farms.—Farms on which the sale of sugar beets in 1940 made up at least 50 per cent of farm products sold were found in the counties of Kent, Lambton, Essex and Middlesex of Ontario, in the Taber, Lethbridge, Raymond and Magrath irrigated areas of Alberta and in the Winnipeg and Red River Valley districts of Manitoba (Figure 18).

Tobacco Farms.—Tobacco farms, as reported in 1941, are concentrated largely in the counties of Norfolk, Elgin, Essex, and to a decreasing extent in the counties of Kent, Oxford and Brant in Ontario (Figure 19). A total of 83.9





million pounds of tobacco was produced in Ontario in 1941, mainly of the light cigarette type<sup>1</sup>. This was about 90 per cent of the total Canadian production. Production in Quebec was 9·5 million pounds and farms specializing in tobacco were found in the counties of Joliette, Montcalm, L'Assomption and Berthier. The only other province where climatic and other physical factors permitted specialization in tobacco was in British Columbia; some 766,000 pounds having been produced in the Lower Fraser Valley in 1941.

Fruit and Vegetable Farms.—Fruit and vegetable production in Canada has expanded at a rapid rate and covers a relatively wide range of crops. The regional distribution of specialized fruit and vegetable farms is shown in Figure 20. Apple farms are found principally in the Annapolis Valley of Nova Scotia; the Gagetown district of New Brunswick; the Rouville area of Quebec; that part of Ontario lying along the north shore of Lake Ontario, the eastern end of Lake Erie and south of Georgian Bay; and the Okanagan Valley of British Columbia. Farms specializing in such soft fruits as peaches, plums and cherries are largely confined to the Niagara District in Ontario and the southern Okanagan Valley in British Columbia. Pear orchards are important in these areas. Vineyards for the production of grapes occur in the Niagara Peninsula. Small fruits such as strawberries and raspberries are produced more widely, specialized small fruit farms occurring in the vicinity of urban centres in most parts of the country.

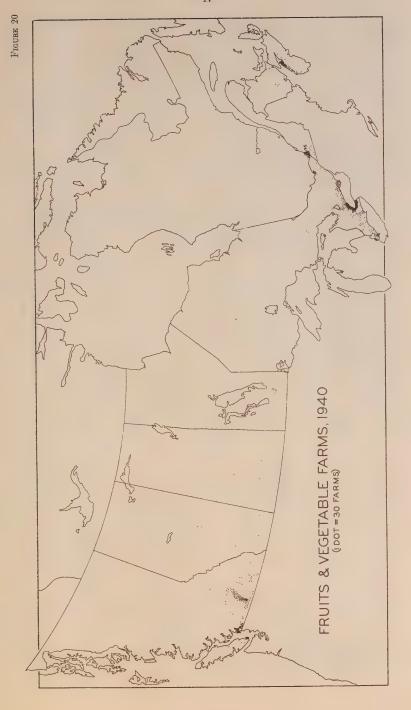
Vegetable or market garden farms are found adjacent to most of the larger centres of population but are particularly important in the vicinity of Montreal and Toronto, in Prince Edward, Norfolk, Kent and Essex counties of Ontario, the Winnipeg area in Manitoba and the Okanagan and Lower Fraser Valley of British Columbia.

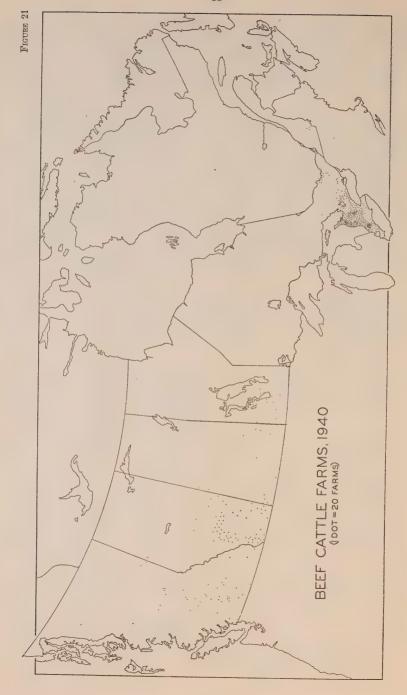
Beef Cattle Farms.—Beef cattle production is common to the average farm business over a wide range of districts in Canada. There are few farms even in intensive and specialized areas, where cattle kept for beef are not found. Frequently the dual use of cattle for beef and dairy purposes overlaps and a distinct separation is very difficult.

Areas where beef cattle production provides the major source of farm income, however, are distinguishable as compared with sections where diversification of beef cattle production with other enterprises results in a mixed type. These areas are shown in the accompanying dot map (Figure 21). The internal farm organization with respect to the beef cattle enterprise differs somewhat between the various areas of concentration. In the counties of Ontario bordering on Lake Huron and Georgian Bay, the topographical and soil conditions are such as to make substantial areas of rough pasture available. Stall feeding is practised in surplus feed areas such as Essex and Kent, a common practice being to buy feeder cattle and fatten them in addition to those raised. In Middlesex and Lambton grass fed cattle are of more importance.

In the short-grass and foothills areas of the prairies, beef cattle production is a grazing or range proposition and the scale of operation is of a relatively large and extensive nature. A similar situation exists on beef cattle farms in the northern inter-mountain valley and plateau areas of British Columbia. In the area from Olds to Edmonton in the parkland section of Alberta, beef cattle production is associated with a variety of farm enterprises and, as shown on the map, is the major enterprise on a considerable number of farms.

<sup>&</sup>lt;sup>1</sup> Quarterly Bulletin of Agricultural Statistics, Dominion Bureau of Statistics, Vol. 36, p. 93.





Dairy Farms.—Farms on which the major share of farm income in 1940 was derived from milk and milk products are, for the most part, concentrated near the industrial centres of Ontario and Quebec (Figure 22). Dairy farms near the large urban centres were mainly of the fluid milk type. In other parts of the country, the major part of the farm income represents sales of butterfat, cheese or butter, or the sale of whole milk for the production of these and other dairy products. The development of this type of production has been greatly enhanced by the establishment of creameries, cheese factories and other dairy manufacturing facilities when strategically located.

In addition to Eastern Canada, an extensive concentration of dairy farms occurs in the Lower Fraser Valley and Howe Sound areas of British Columbia. A few dairy farms are also found near each of the main urban centers in Alberta and Saskatchewan. In Manitoba most dairy farms are found in the inter-lake area and the southeastern corner of the settled portion of the province.

Swine Farms.—The pattern of swine farms and hog production in general in Canada closely follows the pattern of barley production and, to some extent, oats production. This may be readily noted by a comparison of the dot map showing the distribution of swine farms (Figure 23) with the maps for barley and oat production (Figures 5 and 4).

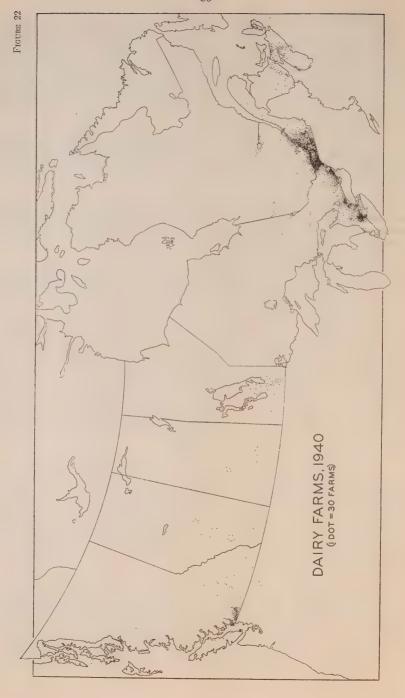
Swinc farms are found in nearly all counties of southern Ontario with the greatest concentration in the counties of Perth, Waterloo, Wellington and Huron, Simcoe and Dufferin, and in the extreme southwest counties of Essex and Lambton. In Quebec, swine farms are most common around St. Hyacinthe.

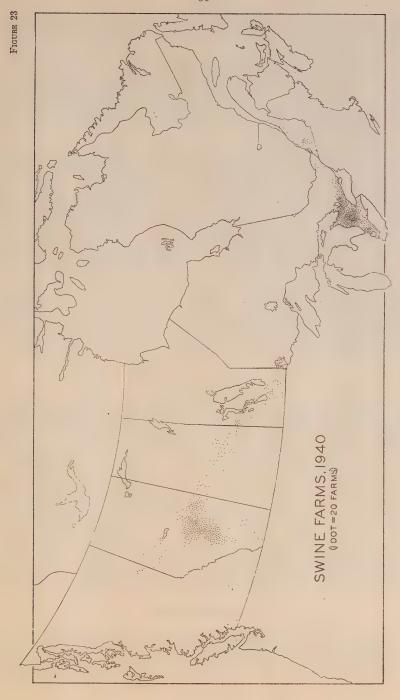
Outside Ontario and Quebec, swine farms are mainly in the parkland areas of Western Canada. Those of most intense concentration are in the general Olds, Red Deer, Edmonton and Vegreville areas. This area also extends to some extent into the northeastern districts of Alberta around St. Paul and Bonnyville and northwestern Saskatchewan. In Saskatchewan, hog production is of greatest importance in the Prince Albert, Melfort and Humboldt districts. In northern Manitoba, swine farms are relatively numerous around Swan River. In southern Manitoba, swine farms are found largely in the Portage La Prairie, Carman and Winnipeg areas. Outside of Ontario, parts of southern Quebec and the Prairie Provinces, specialized swine farms are relatively unimportant, pigs being raised to supplement other farming enterprises.

Sheep Farms.—Sheep are produced in many areas as a side-line enterprise and there are relatively few farms in Canada which can be termed sheep farms on the basis of 50 per cent or more of the farm income being derived from this source (Figure 24). Of greatest importance are the open plains sections of southern Alberta and southwestern Saskatchewan and particularly where physical and climatic factors make the growing of wheat an extremely hazardous venture. In Alberta, many sheep farms or ranches are found in the more favoured grass land and foothills areas near Cardston and in the parkland section from Olds to Red Deer to Edmonton.

Sheep ranches are found interspersed with beef cattle ranches in the intermountain grazing valley and plateau areas of northern British Columbia. Many farmers in the Canada Land, Bow Slope and Brooks irrigation districts use the adjoining lands, which are submarginal for wheat production, for the grazing of sheep which are fattened on the products from the irrigated land.

In Manitoba, farms termed as sheep farms, are found mainly in the Gladstone, St. Rose du Lac, Winnipegosis and inter-lake areas. In Ontario, sheep





farms occur largely in the counties near Georgian Bay and the northern countries of southwestern Ontario, in Middlesex and Elgin, and in Renfrew and Lanark counties in eastern Ontario.

Miscellaneous and Forest Product Farms.—Farms on which 50 per cent or more of the gross revenue was obtained from the sale of forest products, maple sugar or syrup and honey or beeswax were classified as Miscellaneous and Forest Product Farms. Apart from a small number of specialized apiaries which fell into this group, farms of this type are found largely in the occupied wooded areas of each province (Figure 25).

In the early pioneer stage of development of a wooded area, forest products usually represent an important source of cash income on farms. Such cash income is supplemented by income in kind in the form of food for the farm household and by some sales of farm products. In the more productive areas as land clearing and development progress, income from the sale of farm products becomes more important and the farm woodlot serves as a source of supplementary income and fuel for household use. In rough or swampy areas where the soil is relatively poor and unproductive the second stage of development may not materialize and the sale of forest products together with outside employment remain the main sources of cash income. In many areas improved land has been abandoned for cropping purposes and has reverted to permanent pasture and forest.

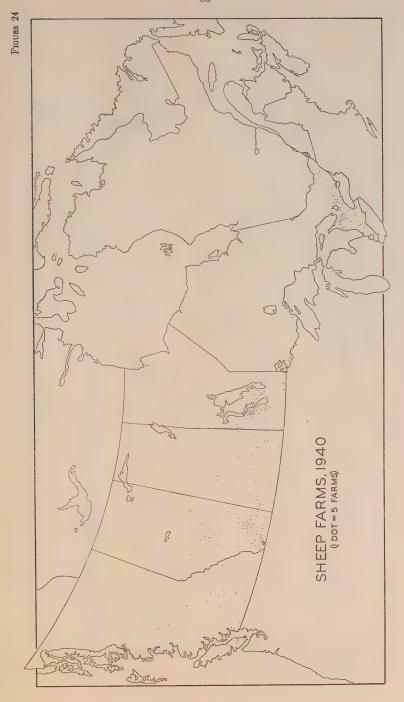
Forest product farms are principally found in the cut-over sections of Nova Scotia, New Brunswick, the Gaspe Peninsula, in northern areas of Quebec and in northeastern and northern Ontario as well as in certain areas in British Columbia. In the northern sections of the Prairie Provinces and in southeastern Manitoba farms falling into this class are found largely in areas of recent occupancy and represent a pioneer stage in agricultural development.

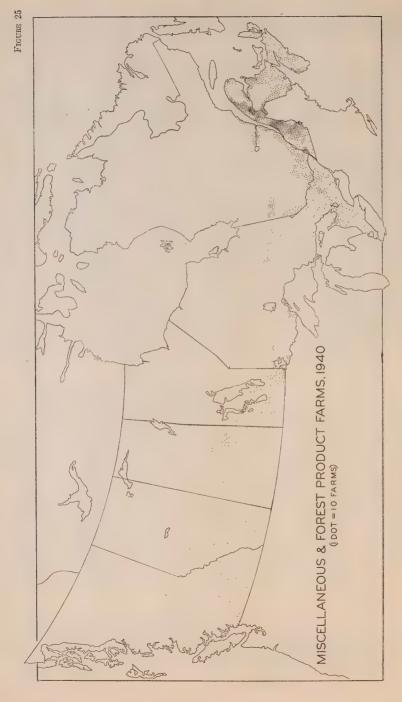
# Self-Sufficing Farms

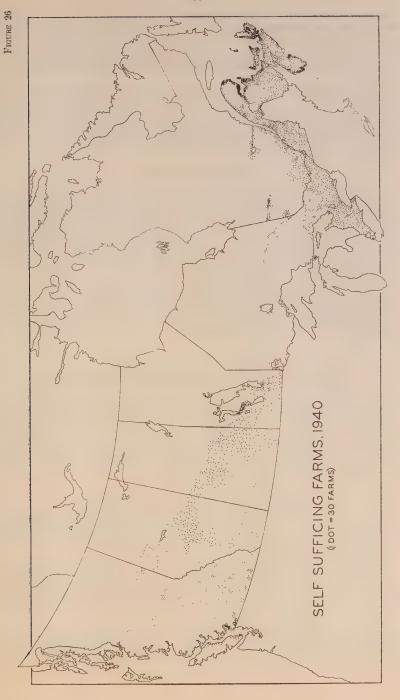
Self-sufficing farms in general represent small farms with a simple organization which usually supply a rather meagre living to the operator and his family. The term, self-sufficing farm, should not be interpreted to mean that such farms actually produce enough to supply the entire needs of the farmer and his family. They are rather farms on which there is little, if any, commercial agriculture. On such farms the income from the sale of farm products is of minor importance, the major contribution being the provision of shelter and food for the farm family. As shown in Figure 26, there is a rather wide distribution of these farms in Eastern Canada, areas of concentration being found along the Atlantic and Gulf of St. Lawrence shore lines in the Maritime Provinces and Quebec. Typical areas where self-sufficing farms are common are the Gaspe Peninsula, Chaleur Bay and in Yarmouth and Shelbourne counties in Nova Scotia. In western Canada self-sufficing farms are interspersed with commercial farm types in the parkland areas of the three Prairie Provinces and on the fringes of settlement. In British Columbia such farms are found in nearly all the settled sections.

### Part-Time Farms

Part-time farms are farms where 50 per cent or more of the gross revenue is obtained from work performed off the farm, such as lumbering, fishing, road work, custom work, and from overnight lodgers or tourists. Part-time farms are of a great deal of interest and are becoming increasingly important. Two general







situations are represented on these farms. Around the cities they may represent farms which are operated by persons whose occupation is other than farming and who depend on other lines of endeavour for their principal income. In areas remote from urban centres, the operators of these farms generally report their occupation as farming but supplement their income from work at jobs other than farming.

As shown in Figure 27, part-time farms in Canada have a wide distribution through the greater part of the settled areas but the heaviest concentration occurs along the Atlantic and Gulf of St. Lawrence coastal regions in conjunction with fishing, in the forest areas of Nova Scotia, New Brunswick and Quebec and around the mining areas in northern Quebec and Ontario.

### Semi-Commercial Farms

Another important group of farms, the general pattern of which follows the outline of self-sufficing farms, is what may be described as a semi-commercial type. This type of farm, which is classified in the census as self-sufficing combination, represents a further stage in the degree of commercialization of agriculture, the principal source of revenue being from products produced for consumption on the farm, supplemented by some sales of farm products. Areas of greatest concentration for this type are found in southern Quebec, the shoreline of the counties bordering on the St. Lawrence River and in Prince Edward Island (Figure 28). In Western Canada the pattern is also similar to the self-sufficing farms with a tendency to a concentration in the areas north and south of Winnipeg, sections bordering on the Riding Mountain area and parts of northeastern and east-central Saskatchewan.

### TYPES OF FARMING ACCORDING TO REGIONS

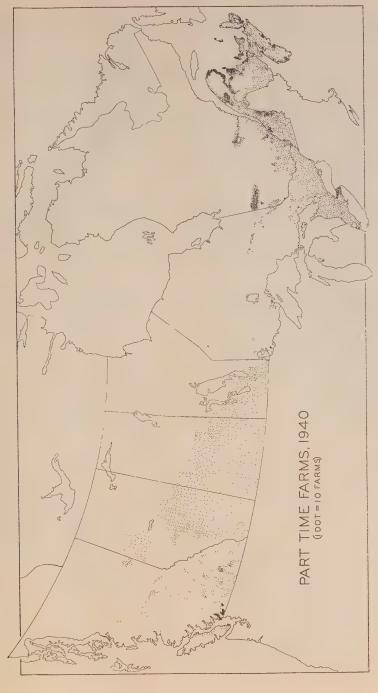
The accompanying colour map of type-of-farming areas in Canada is based on a two-fold classification. This classification includes (1) economic organization which is shown in cross-hatching, and (2) kind of production carried on which is shown in colour. An examination of the map will show that agriculture in Canada has been differentiated into 198 major type-of-farming areas. Of these 27 are in British Columbia; 69 in the three Prairie Provinces; 32 in Ontario; 45 in Quebec; and 25 in the Maritime Provinces.

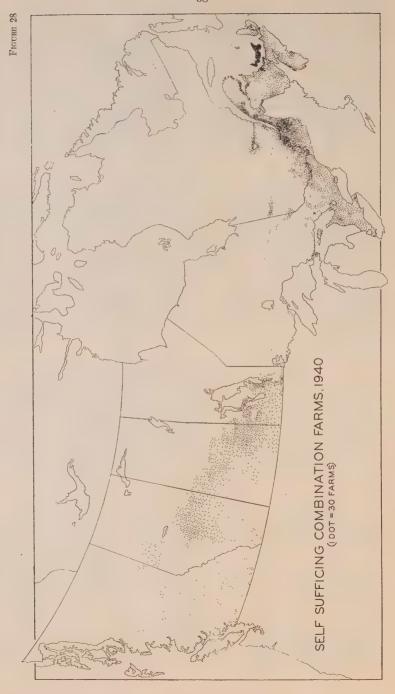
# Classification of Type-of-Farming Areas

Two measures have been used in the classification of type-of-farming areas. These are the percentage of total farm income from various sources and the proportion of the labour input, measured by productive man work units, which was applied to the different farm enterprises.

Census districts were first classified according to organization as commercial, semi-commercial, self-sufficient or part-time farming areas. Areas were designated as semi-commercial if products consumed on the farm represented 35 to 60 per cent of farm sales. If products consumed amounted to over 60 per cent

<sup>1</sup> A productive-man-work-unit is a comparative measure of the amount of productive work which may be accomplished by a man in a 10 hour day. In applying this measure the number of productive man work units required to care for an acre of the various crops or one unit of the different classes of livestock is computed on the basis of the best data available; the resulting standards are multiplied by the number of units of each enterprise to obtain the total labour input per farm.





of total sales the areas were called "self-sufficing". Areas where outside income represented over 40 per cent of farm production were classified as "part-time" farming.

In the classification according to type of production minor census divisions were grouped according to the percentage of total farm income which was obtained from a particular source. Dominance of a particular type of farming was determined on the basis that 50 per cent or more of the income was derived from that particular source, and that no second type represented as much as 50 per cent of the main source. Areas in which two principal sources were required to make up 50 per cent or more of the income, and where no third source made up more than half of the lowest of the other two, were classified as combination types. Areas showing a number of main sources of income, none being dominant, were classified as mixed.

The areas established on the basis of income were checked against a map based on the proportion of the total productive man work units of labour applied to different enterprises. The relative importance of types of farms in a particular area was indicated by a frequency distribution of all types there. Other factors such as condition and utilization of land, as well as soil and topographical features, were used to check boundaries of areas. Data with respect to these factors are included in the appendix.

British Columbia.—The 1941 census of agriculture indicated a total of 26,394 farms in British Columbia. Out of 4,033,570 acres of occupied land, only 893,085 acres were improved. In 1941 the farm population in British Columbia was 102,446 or 12·5 per cent of the total population of British Columbia. In 1931 the farm population accounted for 14·7 per cent of the population of the province.

Farms in British Columbia are relatively small. Less than 41 per cent of the farms were over 50 acres in size in 1941 and only 14 per cent were over 200 acres. The average size of farms was 153 acres, of which 34 acres was improved land. Field crops averaged 20 acres, improved pasture 6 acres and the balance was largely in fallow, orchards and market gardens. The unimproved land was mainly native pasture, with sizeable acreages of woodland and minor amounts of marsh and waste land.

In distribution of field crops, cultivated hay averaged 10 acres, oats, wheat and barley averaged 4, 3 and 1 acres, respectively, while crops such as potatoes, mixed grains, rye and others made up lesser amounts.

Livestock numbers were relatively large, especially cattle. An average of 12 cattle per farm were kept, of which 4 were dairy cows. There was an average of 5 sheep and 3 pigs per farm, while hens, chickens and other poultry averaged 106 per farm. Horses averaged only 2.4 per farm.

Agricultural production is carried on intensively in most sections of southern British Columbia and in parts of Vancouver Island (Figure 2). Dairying in combination with livestock and poultry is the basic type of farming on Vancouver Island, although fruit and market gardening are important in some areas. Near Vancouver, in the Fraser Valley, dairying and poultry raising are carried on as basic enterprises, while small fruits, market gardens and potatoes are also important. The Okanagan Valley as a whole is famous for apple production and other tree fruits, small fruits and vegetables are of particular importance in the southern part of the Valley. Fruit and vegetables are the principal enter-

<sup>&</sup>lt;sup>1</sup> Map prepared under direction of N. Keyfitz, Dominion Bureau of Statistics, Ottawa, from material supplied by Economics Division, Department of Agriculture.

prises in the Grand Forks and Nelson-Creston areas. In other areas of southern British Columbia, dairying is combined with small fruits and vegetable gardens as well as with beef cattle and poultry.

In the northern section along the Prince George-Prince Rupert railway line, livestock production is interspersed with dairying and poultry and feed grains are relatively important. The scale of farm operations is predominantly on a semi-commercial, self-sufficing or part-time basis. In the central interior, livestock production under range conditions is of considerable importance.

In the northeastern districts of British Columbia, agricultural development is an extension of the Alberta section of the Peace River area. Commercial wheat production is important in the Pouce Coupe area while farther north and around Fort St. John, livestock production on a semi-commercial scale is predominant.

The Prairie Provinces.—The Census of Agriculture in 1941 reported a total of 296,469 farms in the Prairie Provinces. About 34 per cent were in Alberta, 47 per cent in Saskatchewan and 19 per cent in Manitoba. Occupied farm land amounted to 43,277,925 acres in Alberta, 59,960,927 acres in Saskatchewan and 16,891,322 acres in Manitoba. These together make up nearly 70 per cent of the occupied farm lands of Canada.

In the Prairie Provinces a relatively high proportion of the population is on farms. In 1941 this ranged from 57·4 per cent in Saskatchewan to 48·2 in Alberta and 34·2 in Manitoba, as compared with 21·6 per cent for the remainder of Canada. While the total population of the Prairie Provinces was only 21·1 per cent of Canada's total population, the prairie farm population represented nearly two-fifths of the farm population. On the prairies, the rural population is thinly spread and is found on relatively large farms. Considerable variation in density, however, occurs in various sections of the three Prairie Provinces. In general the density of rural population is much greater in the parkland and wooded areas of each province.

While there is a wide range in size of farms in all parts of each province, the average number of acres per farm was 434, 432 and 291 acres for Alberta, Saskatchewan and Manitoba, respectively. Improved land per farm ranged from an average of 256 acres in Saskatchewan to 202 acres in Alberta and 169 acres in Manitoba. This represents 59 per cent of the occupied farm land in Saskatchewan, 46 per cent in Alberta and 58 per cent in Manitoba.

In 1941 field crops occupied about 58 per cent of the improved land and summerfallow about 35 per cent. Wheat, oats and barley are the most important cereal crops. The average wheat acreage in Saskatchewan was 88 acres per farm as compared with 66 in Alberta and 43 in Manitoba. The acreage of oats per farm was 23 acres in Manitoba and 29 in Alberta and Saskatchewan. On the average Manitoba had 26 acres of barley per farm while Alberta and Saskatchewan had 16 and 12 acres, respectively.

Cattle, sheep and swine numbers, in 1941, averaged higher in Alberta than in Saskatchewan or Manitoba. In Alberta there were 13 cattle, 7 sheep and 17 swine per farm as compared with 9 cattle, 2 sheep and 7 swine in Saskatchewan and 12 cattle, 4 sheep and 9 swine in Manitoba. The average poultry flock was 112 birds in Manitoba as compared with 88 in Alberta and 78 in Saskatchewan.

In the Prairie Provinces agricultural operations are generally on a commercial scale. Areas where this is not typical are on the fringe of settlement and generally associated with farms in the Grey soils and in wooded areas.

The importance of wheat production in the Prairie Provinces overshadows all other types of agricultural production. In the greater part of southeastern Alberta, south central Saskatchewan and southwestern Manitoba, wheat is the major and in many cases, the only farm enterprise. In some areas the production of livestock and livestock products is supplementary to wheat, resulting in a wheat combination type of farming.

Grain specialty and grain combination farms are found in northern Alberta, the irrigated areas of southern Alberta, northeastern Saskatchewan and south central Manitoba where feed grains, alfalfa, grass seed, clover, sugar beets and canning crops compete with wheat as major farm enterprises.

Livestock enters into the typical farm set-up on many grain farms and to a greater degree in the livestock combination and livestock specialty farms. The semi-arid sections and the foothills ranching areas are classified as livestock specialty areas due to the predominance of cattle and sheep. Hogs are usually associated with diversified crop enterprises and as a result, even when large numbers of hogs are carried, these farms do not emerge in the classification as livestock specialty farms.

Although specialized dairying is carried on by a number of farmers close to each important urban centre, dairy farming is not of sufficient importance on an area basis to show up as a type-of-farming area. However, most farmers, except possibly those located on the superior wheat clay loam and clay soils, keep at least a few cows and ship some cream during the summer period.

Ontario.—The first agricultural settlement in Ontario was in the Niagara peninsula in 1780. The development was continuous from that time forward and by 1852 there were just under 100,000 farms in the province. The number of farms in Ontario reached a peak about the turn of the century. Since then numbers of farms have shown some decline and in 1941 totalled 178,204.

In 1941, 704,420 persons in Ontario were classified as farm population. This was 35·9 per cent of Canada's farm population. Those on farms represented 18·6 per cent of the total population of the province in 1941 as compared with 23·3 per cent in 1931. Farm population figures are not available prior to 1931 but the percentage of total population classified as rural decreased from 78·0 per cent in 1871 to 38·3 per cent in 1941. This shift in population from farms to cities and towns has been closely associated with the industrial development of the province.

The occupied farm land in Ontario in 1941 was 22,387,981 acres. This is approximately one-half the occupied area in Alberta and over one-third of Saskatchewan's occupied farm lands. The improved area in Ontario is about 60 per cent of the land used for farming purposes.

As compared with the Prairie Provinces farms in Ontario are relatively small. Approximately 70 per cent of all farms ranged in size from 50 to 200 acres in 1941. Only 1,274 farms were in the size grouping of 480 to 639 acres while 675 farms were of a larger size.

The average size of farm was 126 acres with 75 acres improved and 51 acres in field crops. Improved pasture averaged 18 acres per farm while orchards, market gardens, fallow and other uses averaged 6 acres. A break-down of the distribution of field crops reveals that cultivated hay crops, oats, mixed grains, wheat and barley, with an average of 21, 11, 9, 3 and 2 acres, respectively, were the main crop.

Total cattle numbers were the highest of any province, the average per farm being 15 head. Sheep averaged 4 per farm, swine 10 and hens, chickens and other poultry 130.

In Ontario specialized areas are often not well defined and in only rare instances can one find all of the farmers in a given area producing the kind of product for which the district is known. Diversification has been brought about partly through the adaptability of a wide range of crops, varying soil conditions and a comparatively large nearby market for livestock and dairy products and a variety of other farm products. Intensity of farm production is relatively high in most of southern Ontario.

Cash crops are of greatest significance in the extreme southwestern counties of Essex and Kent where corn, tobacco, sugar beets, swine, beef cattle and market gardens are combined on an extensive scale. A larger part of southern Ontario falls into livestock specialty and livestock combination farm types. In the counties bordering Lake Huron and Georgian Bay and the area extending through the north central counties to Peterborough, beef cattle and swine are more important relatively than in other parts. Dairy specialty and dairy combinations are found largely in the southeastern counties and extending to Toronto. In the eastern counties of Ontario, dairy specialty and dairy combination types are also the most important. In addition to dairy production, swine, beef cattle and poultry are valuable enterprises. In the Arnprior, Renfrew and Pembroke areas, feed grains are a source of additional farm income.

Canning crops are an especially important source of income in Prince Edward County. Sugar beet production is important in south Lambton, west Elgin, Essex, and Kent, and tobacco raising reaches its highest degree of specialization in Norfolk county. Fruit and vegetables are the main sources of income in the Niagara peninsula and on a relatively narrow strip of Lake Ontario shoreline to Toronto.

In the area north of Lake Simcoe and extending up to North Bay, mixed farming on a semi-commercial scale is prevalent. A considerable part of this territory is not well suited to agriculture. The sale of forest products combines with beef cattle and dairy products as the major sources of income. A dairy combination farm type predominates in the Cochrane, New Liskeard and Sudbury areas of the northern sections of Ontario. In the Cochrane area, livestock and poultry account for a large part of the farm income. A great proportion of farm production is consumed on farms and for many farmers outside employment in lumbering camps and mines is an important supplement to the farm income.

In the extreme western section of Ontario, relatively small areas of agricultural development exist in the Kenora, Dryden, Rainy River and Fort William-Port Arthur areas. In these areas sources of income other than agriculture are of great importance, and result in part-time farming. Agricultural products are mainly of animal origin, milk, meat and wool, while the sale of forest products from the farm makes up a large part of the gross income. At Sault Ste. Marie a dairy combination type of farming is predominant while on Manitoulin Island beef cattle, sheep and poultry together with dairy products result in a broader livestock combination type.

Quebec.—Agriculture in the province of Quebec was first started in 1608 when twenty-eight settlers spent the winter at Quebec. For many years, agricultural development was slow because of the numerous difficulties encountered by settlers. In 1667 the population of the area was 3,918 and only 9,674 acres were under cultivation.

Settlement proceeded slowly for many years and only after the middle of the century and the industrial revolution in Great Britain and France did the rate increase. By 1844, 114,496 farms were reported; this number increased until 1891 when there were 174, 996 farms. Following that year the number of farms in Quebec declined until, in 1931, 135,957 farms were reported. In 1941 the number of farms was 154,669, an increase of 18,712 over 1931. Only about 5.4 per cent of the total land area of Quebec has been occupied. This is due to the rugged nature of most of its northern section, largely included in the Canadian Shield. Since 1871 there has been a gradual increase in the occupied farm area. In 1871, 11,025,786 acres were occupied as compared with 18,062,564 in 1941.

The population of Quebec was 3,331,882 in 1941, second only to that of Ontario. The percentage of population reported as being on farms was 25·2 per cent, which is slightly more than in Ontario. The shift of population from farming to urban centres followed a similar trend to that in Ontario. In 1871, 78·0 per cent of the population was rural as compared with 60·3 per cent in 1901, 44·0 per cent in 1921 and 36·7 per cent in 1941.

Over 73 per cent of Quebec farms range from 51 to 200 acres in size. Only 1,081 farms were over 480 acres in 1941. The distribution of farms by size is similar to that in Ontario.

The average size of farms was 117 acres in 1941. Improved land amounted to 58 acres, of which 39 acres were utilized for field crops, 16 acres for improved pasture and 3 acres for all other crops. The area in woods was 39 acres per farm. This was considerably more than in Ontario, but substantially less than the average in New Brunswick or Nova Scotia. As in Ontario, cultivated hay was the most important crop, averaging 24 acres per farm, while oats averaged 10 acres.

The cattle population is directly associated with the relatively high improved pasture and cultivated hay acreage. Cattle averaged 11 head per farm, while sheep averaged 3, swine 5 and poultry 54.

In Quebec the layout of the farms in the older settled areas has been conditioned by the fact that settlement took place first along the rivers and each colonist was given access to the river, which at the time provided the only means of transportation and communication. Later when settlement had increased a second tier of farms was opened up along a roadway or concession a mile or more behind the first. These and other factors had a bearing on the pattern of settlement and resulted in an irregular system of land holdings as compared with the regular and uniform unit survey pattern in the Prairie Provinces. In Quebec, 95·2 per cent of the occupied farm land was operated by the owner in 1941 as compared with 85·0 per cent in Ontario, 80·2 per cent in British Columbia and 59·4 per cent in Saskatchewan. While prior to 1941 mechanization of farms took place more slowly in Quebec than in some other provinces the present trend is distinctly in that direction where conditions make it possible.

As a result of the comparatively level topography and a high percentage of arable land together with the favourable climate, agriculture in the St. Lawrence Lowlands is generally quite prosperous. The absence of serious crop hazards and the proximity of a large domestic market have a stabilizing effect on farm income. Diversity of products is general, there being quite a variety of farm enterprises, but major importance is usually attached to one or more enterprises in the operation of the individual farm. In the rough and hilly areas and in the areas removed from the Lowlands the prevalence of forests hinders

agricultural development and favours a part-time or non-commercial farm type.

A large section of southern Quebec was classified as dairy specialty and dairy combination farm types. This is particularly the case in the counties south of the St. Lawrence and east to include the Eastern Townships. Beef cattle, swine and orchards often combine with dairy products in varying proportions in these areas.

A number of areas in which there is no dominant enterprise are classified as mixed farming. In the Papineau, Labelle, St. Agathe area, north and east of the Ottawa River, dairying is combined with forest products and livestock on a semi-commercial basis. In the Rouville and Montreal areas dairying is combined with apples, market garden crops, livestock, tobacco and potatoes on an extensive scale. The Ste. Julienne de Ramsay and Compton and Wolfe areas touching on Maine and extending north to the Island of Orleans have a combination of dairying, beef cattle, swine, poultry and forest products. In the wooded areas in the easterly part of southern Quebec, maple sugar is an important source of farm income. Market gardens, potatoes and milk are important parts of the farm business close to the urban centres. Tobacco, of the cigar and flue cured types, has found a place of importance in the L'Assomption, Joliette and Rouville areas.

On the south shore of the St. Lawrence River dairying is of special importance combined with swine, beef cattle and potatoes. In the Matane, Gaspe and Bonaventure areas farming is usually a part-time and non-commercial proposition, the main farm enterprises being dairying, livestock production and poultry associated with the sale of forest products.

On the north shore of the St. Lawrence in its eastern section, forest products are of main importance together with dairy and livestock. In the Lake St. John area dairying provides the main source of farm income while livestock and livestock products are also important. In the northern Saguenay and St. Francois de Sales areas, mixed dairy, forest products and livestock combination is the general farm organization carried out on a part-time and self-sufficing basis.

In that part of the clay belt adjoining the Cochrane and New Liskeard areas in Ontario, dairy combination and mixed types are predominant. Operations are mainly on a part-time and semi-commercial basis.

The Maritime Provinces.—New Brunswick, Nova Scotia and Prince Edward Island are grouped together largely because of the similarity in climate and soils, because of the close association of farming activities with the forest and sea and also because there is a close association of farm types in each province. In these provinces, agriculture was developed at an early date. Settlement took place in Nova Scotia early in the seventeenth century and the export of apples was first made from the Annapolis Valley in 1881. By 1881, there were 36,837, 55.873 and 13,629 occupied farms in New Brunswick, Nova Scotia and Prince Edward Island, respectively. In Nova Scotia and Prince Edward Island the peak was reached in 1891, while the peak year in New Brunswick was 1911.

A moderate proportion of the Maritimes is still rural even though the percentage has declined consistently since the late 1880's. This is especially true in Prince Edward Island. In the Maritimes 358.482 persons were classified as farm population in 1941 out of a total of 1,180,770.

Prince Edward Island uses the highest proportion of its land area for farming. Here 83.6 per cent of the land is in farms as compared with 22.5 and 28.7 per cent for New Brunswick and Nova Scotia, respectively.

In 1941, 3,964,109, 3,816,646 and 1,618,868 acres, respectively, were in occupied farms in the provinces of New Brunswick, Nova Scotia and Prince Edward Island. This represents about 42 per cent of the occupied farm land in Ontario and only 15·7 per cent of that in Saskatchewan. The majority of Maritime farms fall in the 51 to 100 acre range and the average size in 1941 was 124, 116 and 96 acres in New Brunswick, Nova Scotia and Prince Edward Island, respectively.

The average acreage of improved land in Prince Edward Island was 60 acres per farm as compared with 39 acres in New Brunswick and 24 acres in Nova Scotia. The area in field crops was 38, 27 and 16 acres for the respective provinces. The remainder of the improved land was largely devoted to improved pasture. In New Brunswick and Nova Scotia, land classed as woodland averaged 69 and 63 acres per farm, respectively, which is considerably higher than for any other province. Cultivated hay and oats were the most important crops in each of the Maritime Provinces. Potatoes are an important cash crop and averaged 3·3 acres per farm in Prince Edward Island, 1·4 acres in New Brunswick and 0·6 acres in Nova Scotia. In Prince Edward Island over 88 per cent of the farms were reported as growing potatoes in 1941.

The number of cattle per farm was lower in these three provinces than in any other. In Prince Edward Island the average number per farm was 8 and in the other two provinces, 6. The average number kept for milking was 4 in each province.

Sheep and swine were kept in moderate numbers only. With regard to poultry, an average of 70 birds were kept in Prince Edward Island and 34 and 35 in Nova Scotia and New Brunswick.

In the Maritime Provinces agricultural production is developed along five main types of farm organization. These are the production of apples, potatoes, dairy products, fur farming, mainly foxes, and the sale of forest products.

Outside of a small area in the parish of Gagetown in the lower St. John Valley of New Brunswick, commercial apple production is confined to the Annapolis and Cornwallis valleys of Nova Scotia. In 1940, over 3·3 million bushels of apples were produced in the counties of Kings, Annapolis and Hants. In this area the production of vegetables, livestock and dairy products is also important. In the Gagetown area these enterprises are also found.

The very friable and slightly acid loam soils of Prince Edward Island and the area in Carleton and Victoria counties in the upper St. John Valley of New Brunswick favour the intensive production of potatoes. In nearly all parts of Prince Edward Island, especially in the East Point and Kings county area and the Lake Traverse area, potatoes provide the major proportion of farm income. In all areas livestock and especially dairy cattle and fur farming are important sources of income, while cultivated hay and oats are grown for livestock feed.

Three main dairy specialty areas are found in the Maritimes. These are the St. John-Sussex area in southeast New Brunswick, the Truro area on the mainland of Nova Scotia and the Sydney area in the northeastern part of Cape Breton Island. In the first two areas livestock sales also make an important part of farm income. In the Cape Breton area dairy farming has developed as a result of the proximity of the Sydney-Glace Bay dairy market for fluid

milk and is dependent largely on purchased feeds. In this area outside employment provides the major source of income on most farms with the result that the

area is classified as part-time farming.

Near Moncton in the Westmorland area of New Brunswick and the Cumberland, Hants, Halifax and Pictou areas of Nova Scotia, a dairying combination predominates with dairy and livestock and either poultry or forest products as the major sources of income.

Elsewhere, in New Brunswick and Nova Scotia, agriculture is subsidiary to fishing, fur farming, trapping or lumbering. Agriculture is carried on when work is not available in the main occupation or is done by other farm folk when the operator is on the sea or in the woods. In these cases, the products are largely consumed by the farm family.

# APPENDIX

TABLE 1.—PERCENTAGE DISTRIBUTION OF THE UTILIZATION OF OCCUPIED FARM LAND ACCORDING TO TYPE-OF-FARMING AREAS, 1941

	Average size of farm in area	688 1,237 1,237 1,038 1,03	23 23 23 23 23 23 23 23 23 23 23 23 23 2
Q	Number of farms	46 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	1,734 4,633 4,734 1,223 1,223 1,095 5,166 5,166
UNIMPROVED LAND	Marsh or waste land	986927298472671986986946949769869419	44000117901140 
UNIME	Prairie or natural hay	90999999999999999999999999999999999999	00000000000000000000000000000000000000
	Wood- land	$\begin{array}{c} 4400449084111999089999999999999999999999$	2222224 22222224 1123222224 142222224 1424
	Total	0.00 C C C C C C C C C C C C C C C C C C	\$5477787885 \$5477787885 \$5475 \$545 \$545 \$545 \$545 \$545 \$545 \$5
	Other		01 0100-11-1- 00 0-1004-0-0
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WAND	Small fruits and nursery products	111118891180111801118011118	1 1 1 3 1 3 4 1 1 1 1 1
MPROVED LAND	Orchards and vineyards	24 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
I	Market	9   1   080 04040 0   0   1   1   0   1   1   1   1   1	11111111111
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PROVINCE		Columbia	Alberta

# APPENDIX—Continued

TABLE 1.—PERCENTAGE DISTRIBUTION OF THE UTILIZATION OF OCCUPIED FARM LAND ACCORDING TO TYPE-OF-FARMING AREAS, 1941

	Average size of farm in area	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Q	Number of farms	10, 903 2, 803 10, 654 10, 654 10, 654 1, 488 1, 771 1, 488 1, 357 1, 357	782 782 782 782 782 783 783 783 783 783 783 783 783 783 783
Unimproved Land	Marsh or waste land	0000004000000400000 004004000000010	0000-00-40444000-0-6-6-400 -040000-0-00-0-
UNIMP	Prairie or natural hay	88484884888888888888888888888888888888	\$58.848.888.444.888.488.8888.8888.8888.8
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	Other	**************************************	
	Pasture	81081111018111800 	001000000000000000000000000000000000000
	Fallow	<ul><li></li></ul>	80480444480440844788000
CAND	Small fruits and nursery products	1 2 2 1 2 1 1 1 1 1 1 4 2 1 1 1 1 3 3 1	
IMPROVED LAND	Orchards and vineyards	************	1111111111111111111111111
	Market	111111111111111111111111111111111111111	111111111111111111111111
	Field	4825000000000000000000000000000000000000	7 51 7 52 52 52 52 52 52 52 52 52 52 52 52 52
	Total	00000000444400004000000000000000000000	1221788884888888888888888888888888888888
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Manitoba.	Ontario	Quebec

APPENDIX—Continued

TABLE 1.-PERCENTAGE DISTRIBUTION OF THE UTILIZATION OF OCCUPIED FARM LAND ACCORDING TO TYPE-OF-FARMING AREAS, 1941

	Average size of farm in area	8.05.05.05.05.05.05.05.05.05.05.05.05.05.
	Number of farms	68 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
UNIMPROVED LAND	Marsh or waste land	
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	Other	$\frac{1}{1}$
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	Fallow	0.51
AND	Small fruits and nursery products	111 00 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
MPROVED LAND	Orchards and vineyards	0.1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Ħ	Market	11.000.000.000.000.000.000.000.000.000.
	Field	88884444444444444444444444444444444444
	Total	\$3468386688868468666845384568456668486848888888888
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20000000000000000000000000000000000000	00000000000000000000000000000000000000	95.0
88888888888	200000000000000000000000000000000000000	100001
174 175 176 177 178 179 180 181 183 183	185 186 187 187 190 191 193 194	195 196 197 198
New Brunswick	Nova Scotia	Island

## APPENDIX—Continued

TABLE 2.—PERCENTAGE DISTRIBUTION OF TYPES OF FARMS ACCORDING TO TYPE-OF-FARMING AREAS, 1941

Unspeci- fied and not reporting	HHHHWW   10000 HHW   1000 HHWW   1000 HHWW   1000 HHWW   1000 HHWW   1000 HHWW   1000 HWW   1000	9000-00 5000-00
Other combination	4004000 100004401044F006F400F90 4004004 000F00004000400F0400	141314
Dairy combi- nation	9 84441 69999991011 4999999491 8 9007	2008 2004 2004 2004
Animal combination	+0+00	14,000
Grain combi- nation	4410 10 1 1 10 10 10 10 10 10 10 10 10 10	1.1.00
Part	6.52524 6.5254 6	8777.854 7011007
Self- suffic- ing combi- nation	85.58.56.56.44.48.85.75.66.75.75.66.75.75.88.85.75.88.85.75.88.85.75.88.85.75.88.85.75.88.85.75.88.85.75.88.85.75.88.85.75.88.85.85.85.85.85.85.85.85.85.85.85.85	20.0 11.9 7.1 19.1 28.0
Self. suffic- ing	0.000	30.00
Other pro- ducts	11100 1 44000000000400004000	1.00
Animal special-	400-7-7-6 400-7-7-6 860-6-6-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7	0.4 mg artico
Poultry	2 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	8 8 8 8 1
Dairy pro- ducts	6 4 8 11 1 2 4 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.2
Vege- tables, fruits and nursery products	<ul><li></li></ul>	1 1 1 1 1
Potatoes, roots, tobacco and other crops	9 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1
Grain and hay farms		12.5 57.7 7.4.8 21.9 21.9
Area No.	1884567800118848678808188488	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
Province	British Columbia.	Alberta

<b>800009</b> 09999999999999999999999999999999	<ul> <li>- C C C C C C C C C C C C C C C C C C C</li></ul>
$ \begin{array}{c} \mathbf{gg} & \mathbf{e} & \mathbf{e} & \mathbf{gg} & \mathbf{e} & \mathbf{e} & \mathbf{gg} & \mathbf{e} $	
<u>0</u> 110001000014100100040 • • • • • • • • • • • • • • • • • • •	00 00004440000480040000
99944075 Tr 9974 0 0 9 0 0 4 0 1 0 0 9 1	00000-40400040000000000000000000000000
4010/r/00001/r/000400100 4000 00r401010101/400000000 4000	8999900000004-4-0-0-4-0-0-0-0-0-0-0-0-0-0
<ul> <li>         α α α α α α α α α α α α α α α</li></ul>	
4661-8888-1-1-887-1-8-1-8-1-8-1-8-1-8-1-8-1	4.6.4.8.4.4.6.4.6.4.6.6.4.6.6.6.6.6.6.6.
60001000000000000000000000000000000000	80009144101110844404000 0000914410011108444004000
00000   0   00000     1   0   00000     1   00000     1   00000     1   000000     1   000000     1   000000     1   000000     1   000000     1   000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     1   0000000     00000000	111110000100000000000000000000000000000
6.0446.4846.4846.4846.4846.4846.4846.484	# # # # # # # # # # # # # # # # # # #
011000   000000000000000000000000000000	011100011000000000000000000000000000000
000 000001110000011140011	00 00 100 000 000 000 00 100 000 000 00
000000000000000000000000000000000000000	11110001100011111111100001111
0.1 0.1 0.1 0.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4	111111001111111111111111111111111111111
44.7.7.7.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8.8	\$60.00 \$60.00 \$48.40 \$60.00 \$6
00000000444444444466666666666666666666	86000000000000000000000000000000000000
	:

APPENDIX—Continued

TABLE 2.—PERCENTAGE DISTRIBUTION OF TYPES OF FARMS ACCORDING TO TYPE-OF-FARMING AREAS, 1941

Unspecified and not reporting		и <u>компочоричер</u> о <u>4</u> πουώροσο4000
Other combi- nation	— a a 4 a 4 a 4 a 4 a a a a a a a a a a	######################################
Dairy combi- nation	- 00 00 40 00 00 00 00 00 00 00 00 00 00	21-122021200004-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
Animal combi- nation	61.80 6.1.80 6.1.7.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0	@890 0 4 4 4 4 0 0 8 4 0 0 1
Grain combi- nation		11000000001100
Part time	00-10-400000000000000000000000000000000	44477 44777 44
Self- suffic- ing combi- nation	4044082211140222222222222222222222222222	27242 27242 27242 27242 2724 2724 2724
Self- suffic- ing		199.8 199.1 190.0
Other pro- ducts	0	411081144088000100000000000000000000000
Animal special-	94.64.54.5.67.9.59.99.99.99 %	85 850 885 886 888 888 888 888 888 888 888 888
Poultry special ty	1.00000000 0000 000	.  00044000-14-00-1-  000440004004-0-0-
Dairy pro- ducts	010000000000000000000000000000000000000	0.1.0.6.0.0.0.0.0.1.1.4.0.0.0.0.0.0.0.0.0.0.0.0
Vege- tables, fruits and nursery products	1.00   000   100	
Potatoes, roots, tobacco and other crops	11.01111.000000000000000000000000000000	1.0 0.1 1.0 0.1 1.0 0.1 1.0 0.1 0.1 0.0 0.1 0.0 0.0
Grain and hay farms	7.888944888889118888 - 6.8575744888889118889 - 6.85757448888888118888	######################################
Area No.	0010884888888001086459	100 100 100 100 100 100 100 100 100 100
Province	Manitoba	Outario

$\frac{\varphi \omega \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A} \varphi_{A}}{\varphi \varphi_{A} \varphi_{A}} + \frac{\varphi \varphi_{A} \varphi_{A}}{\varphi \varphi_{A}} + \frac{\varphi \varphi_{A}}{\varphi \varphi_{A}$	๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑๑
00000000000000000000000000000000000000	<b>ゆたむ</b> たできる。 <b>ゆたむ</b> たできる。 <b>のよがもつう</b> なたらいる。 <b>はなら</b> なる。 <b>はなら</b> なる。 <b>はなら</b> なる。 <b>はなら</b> なる。 <b>はなら</b> なる。 <b>はなら</b> なる。 <b>はない</b> なる。
7.7 8.7 12.9 12.9 12.9 12.9 12.9 12.9 13.9 14.8 13.9 13.9 13.9 13.9 13.9 13.9 13.9 13.9	20.00 17.80 17.80 17.80 18.90 18
7.5.7.8.4.6.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0	00
81440 100000 100000 100000 1000 1000	11111110018840000111001111111111
90000000000000000000000000000000000000	8831 8831 8831 8831 8831 8831 8831 8831
44681-0008000 1.11117-081 1700-0-170-0-0-4-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	22122222222222222222222222222222222222
<ul> <li>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</li></ul>	7.6.944422 7.6.944422 7.6.94442 7.6.9467 7
	786-7-7-8-7-7-8-8-8-8-8-8-8-8-8-8-8-8-8-
47-7-19-20-20-20-20-20-20-20-20-20-20-20-20-20-	
	00000000000000000000000000000000000000
48.80.044.80.024.1 48.80.044.80.024.1 - 1.181.7.7.4 - 2.0.07.7.7.4 - 2.0.07.7.7.4 - 2.0.07.7.7.4 - 3.0.07.7.7.4 - 3.0.07.7.7.4 - 3.0.07.7.7.4 - 3.0.07.7.7.4 - 3.0.07.7.7.4 - 3.0.07.7.7.4 - 3.0.07.7.4 - 3.0.07.4 - 3.0.07.7.4 - 3.0.07.4 - 3.0.07.7.4 - 3.0.07.4 - 3.0.07.4	84004488004658804468884478894689999999999999999999999999
, 6 2 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6	0 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
70000004 10000 10000000000000000000000000	00000000000000000000000000000000000000
\$6.000000000000000000000000000000000000	6446641466664646464646464646464646466664664
	88888888888888888888888888888888888888

APPENDIX—Continued

TABLE 2.—PERCENTAGE DISTRIBUTION OF TYPES OF FARMS ACCORDING TO TYPE-OF-FARMING AREAS, 1941

	• 0		
Unspeci- fied and not reporting	**************************************	. H	
Other combination	405445604040404000		. 8.11 . 8.0.7.0 . 6.7.0 . 7.7.0
Dairy combi- nation	921-12421 921-13411	001.0000000000000000000000000000000000	10-1 7-2 1-5 1-5 0 0 6
Animal Dairy combi- combi- nation	00000000000000000000000000000000000000	- 000000000000000000000000000000000000	11.000 6.4000 6.4000
Grain combi- nation	0.0	00100100	0.0000000000000000000000000000000000000
Part time	00000000000000000000000000000000000000	411-4-500-600	12.5 6.3 112.5 18.0 18.0 18.0
Self- suffic- ing combi- nation	88888888888888888888888888888888888888	12888888488448 7-1-1-5008488448	23. 24.5.5. 28. 28. 27. 27. 28. 29. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20
Self- suffic- ing	00004000400000400400000000000000000000	2221122222 222112222222222222222222222	
Other pro-	01001401040010014 40100000000000001	444000000000400 4000-000000000000	2.0.01 0.02 4.02 2.03 4.03 4.03 4.03
Animal special-	791011499900 8000 804147690000 0400	10011010000 4500000405000	045000
Poultry special-	1140 010000 00 00 00 00 00 00 00 00 00 00 0	00 000 100 10 01 4001 1000 4	4.1.1.0 0.0.0 4.1.0 0.3.4.0
Dairy pro- ducts	40044121200888899911844100 700078004889900048900	24.000000000000000000000000000000000000	10 22.4 39.2 1.0 0.0
Vege- tables, fruits and nursery products	1.1.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0	000000000000000000000000000000000000000	1.4.00 1.4.00 1.4.000 1.4.000
Potatoes, roots, tobacco and other crops	00000   H10000   00000   00000	10881 10990 1000000000000000000000000000	00000
Grain and hay farms	000000000000000000000000000000000000000	44446444444444444444444444444444444444	211142 7.88210
Area No.	158 160 160 160 160 160 160 160 172 172 173 173	174 175 176 177 178 180 181 182 183 183	185 186 187 188 190
Province	Quebeo-Conc	New Brunswick	Nova Scotia

0.0 1.7 2.5	23.3.70
4666	\$4.5° \$4.5°
1.8 0.6 8.7	8.5 1.8 1.8
0.5	9.5 10.6 17.5 6.6
0.1	1.1
11.4 15.8 9.5 10.5	7.5 6.4 7.1
24.1 30.7 23.8	38.3 33.4 43.0
41.9 47.3 37.4 21.1	16.7 12.4 4.6 17.6
0.7 1.8 2.2	0000 1.446
1.2	25.12
2.2.1.0.1.0	0.0
17.8 0.8 2.4 16.1	1.5
1.0	0000
0.8	11.5 4.8 18.1 4.1
1. 8. 4. 8. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.	22 2.21 3.45 3.45 3.45
191 192 193 194	195 196 197 198
	Prince Edward Island

APPENDIX—Continued

TABLE 3.—DISTRIBUTION OF FARM INCOME ACCORDING TO TYPE-OF-FARMING AREAS, 1941

	Average value of farm sales per farm		108 804 804 136 1,075
	hatio of outside income to farm production	4.4.8.4.8.0.8.4.4.0.1.8.5.8.8.8.4.4.0.8.8.8.8.0.0.4.0.4.0.5.8.4.4.0.8.8.8.8.0.0.4.0.4.0.8.8.8.8.0.0.4.0.4	34.6 10.9 14.1 7.4
	rroducts consumed as per cent of farm sales	2888444081000000000000000000000000000000	88 111.2 4.10.8 37.2 27.2
	Total	888888888888888888888888888888888888888	000000
	Forest products and honey	000000 0000000000000000000000000000000	2.3
93	Other animals and wool	44447-1 100-08888-4-08889-4-6-6-4-4-8-9-6-6-4-4-8-9-6-6-4-4-8-9-6-4-4-8-9-4-8-8-7-4-8-8-7-4-8-8-7-8-8-8-8-8-8-8-8	4.600.
UCTS SOI	Swine	- 0.00000000000000000000000000000000000	18.6 24.5 6.8 6.8
RM PROI	Cattle	2000 000 000 000 000 000 000 000	30.4 4.4.4 0.0 4.1.0 0.0 0.0
PERCENTAGE VALUE OF FARM PRODUCTS SOLD	Poultry and eggs	20.74-1 20.55-2 20.55-	20000
AGE VAL	Dairy prod- ucts	6.0 4444899 6.0 6.0 6.4 6.4 6.4 6.4 6.0 6.0 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4 6.4	2.00 2.00 2.00 2.00 2.00 3.00 3.00 3.00
PERCENT	Vege- tables fruits and nursery	400 000 000 000 000 000 000 000 000 000	0.1
	Po- tatoes roots and tobacco	017 017 0017 0004 0004 0004 0004 0004 00	0.13
	Other grains and forage	$\begin{array}{c} 46991111 \\ -604476987799999999999999999999999999999999$	16.3 35.0 5.3 7.4 12.8
	Wheat	0     0   0   0   0   0   0   0   0   0	16.3 44.4 5.3 78.7 32.6
	Area No.	1984601884601884601	310088
	Province	British Columbia	Alberta

393 3747 3747 3747 3747 3747 3774 3774 3	25.5 25.5 25.5 25.5 25.5 25.5 25.5 25.5
282.36 282.36 282.36 282.36 282.36 282.36 283.36 28	41.0.0.0.8.4.0.4.1.0.0.0.1.0.4.0.0.4.0.0.4.0.0.1.1.0.0.0.1.0.0.4.0.0.0.4.0.0.0.4.0.0.0.0
08.34 08.34 09.04 00.05 00	188.888.688.89.10.14.68.888.888.89.10.14.14.22.14.18.28.18.28.18.28.18.28.18.28.18.18.18.18.18.18.18.18.18.18.18.18.18
000000000000000000000000000000000000000	
00000000000000000000000000000000000000	11111011014001
60.1444144144166666666666666666666666666	<ul> <li>► ► ► □ ★ □ ♥ □ ♥ Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø</li></ul>
28.0.0 28	4.6.1.6.9.7.0.9.7.1.8.1.1.0.0.8.7.7.7.8.4.0.0.8.7.7.7.8.4.0.8.8.7.7.7.8.4.8.8.4.8.8.8.8.8.8.8.8.8.8
6.01 6.01 6.02 6.03	24888888888888888888888888888888888888
	81-00-1-01-00-1-00-400-00-400 83-00-1-00-1-04-00-40-00-40-00-40-00-40-00-1-0-1-
. 644666. 666. 666. 666. 666. 666. 666.	1.58 1.58
10000   0000400   100000   1044   100000   1004   100000   1	110010100001001001000
	111000000000000000000000000000000000000
$\begin{array}{c} 11\\ 11\\ 12\\ 12\\ 12\\ 13\\ 13\\ 13\\ 13\\ 13\\ 13\\ 13\\ 13\\ 13\\ 13$	0.0001944400000000000449000004
40000004000000000000000000000000000000	9888888888888888888888888944888448888888
	: 

APPENDIX—Continued

TABLE 3.—DISTRIBUTION OF FARM INCOME ACCORDING TO TYPE-OF-FARMING AREAS, 1941

	Average value of farm sales per farm	1,564 1,177 1,177 1,177 1,562 1,562 1,562 1,640
:	hatio of outside income to farm production	94000000000000000000000000000000000000
-	Products consumed as per cent of farm sales	0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	Total	565555555555555555555555555555555555555
	Forest prod- ucts and honey	.00000011977.0000447.0000000000000000000000000000
Sold	Other animals and wool	
TUCIS SO	Swine	447.88841111 447.88841111 447.98899111104448899999999999999888888889999999999
вм Рво	Cattle	200708888677 #445000 60000 6448 60000 64500 64500 64500 6550000 65500 65500 65500 65500 65500 65500 65500 65500 65500 65500 65
PERCENTAGE VALUE OF FARM PRODUCIS	Poultry and eggs	6444466666666664476644 64446666666664476644 8880044860 888004486 888004486 888004486 888004486 888004486 888004486 888004486 888004486 88800486
AGE VAL	Dairy prod- uets	0.000000000000000000000000000000000000
Percent	Vege- tables fruits and nursery	100000000000000000000000000000000000000
the first the continue of the	Po- tatoes roots and tobacco	000000000000000000000000000000000000000
To the same of the	Other grains and forage	82444444444444444444444444444444444444
	Wheat	200044088888818181447081189888888888888888888888888888888888
	Area No.	28 88 88 88 88 88 88 88 88 88 88 88 88 8
	Province	Manitoba.

1,586 1,1871 1,872 1,485 1,694 1,533 1,533 1,035 1,035 1,036	283 2846 2846 2846 2846 2846 2846 2846 2846
	848888888888888846744444888888888888 
<ul> <li></li></ul>	######################################
8989888888 18898888	<b>3833333333333333</b>
00000000000000000000000000000000000000	ု မို့ယာ∟်သို့⊢ှသွတ်ကုတ္ဖန္တက်တွေတွင်း ဂြက်တာမြည်း မှသတ်ကုတ္ဖန္တည်တွင်း ဂြက်တပ်တပ်ယများသည်တွေကို မောက်တိုက်သည်တွင်း ဂြက်တပ်တပ်ယများသည်တွေကို မောက်တို့သည်တွေကို မောက်တို့သည်
4430664468333 4450664468333 7704711188	
8.6.7.7.0.6.21 6.6.6.6.21 7.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6.6	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	<ul><li></li></ul>
0.01.7.7.03 0.01.7.7.03 0.01.7.7.33 0.01.7.8.33 0.01.	888848848884888888888844088448 98884884888488888888884408844088448 978844884888488888888888888888408488488488
0.88-1-04-4-05-1 	
1.00 1.00	646699916969401601484688884001011 0118468967698764016886691011
440766644440766644444444444444444444444	621-08 631-65-06 68 4 68 69 69 69 69 69 69 69 69 69 69 69 69 69
4.000 1.000	11.0
11111111111111111111111111111111111111	

82

APPENDIX—Concluded

TABLE 3.—DISTRIBUTION OF FARM INCOME ACCORDING TO TYPE-OF-FARMING AREAS, 1941

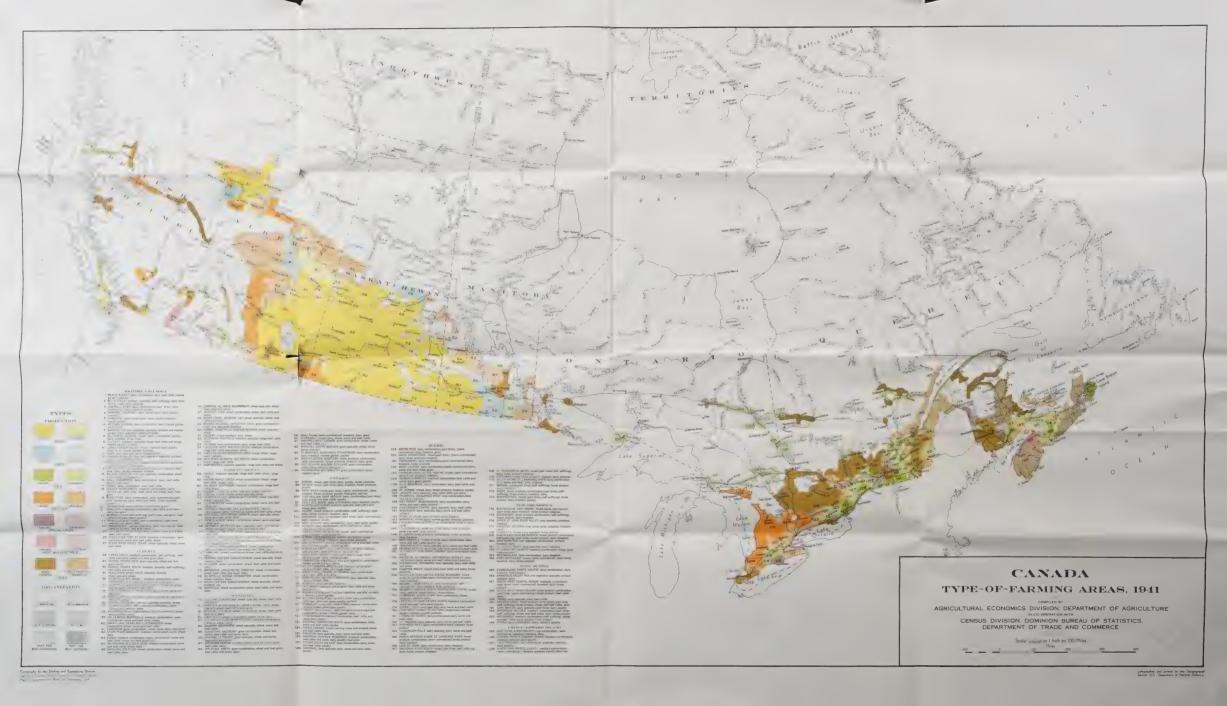
Avorono	value of farm sales	1. 629 1.	500 917 262
Potio of	outside income to farm production	4/-6/-6211778444-0178888 7888118881988 -6/88367888178888	32.0 17.2 53.1
Droduote	consumed as per cent of farm sales	888-1289-228-288-288-288-288-288-288-288-288-	28.7 14.9 55.0
	Total	955655555555555555555555555555555555555	900 000 000 000 000 000 000 000 000 000
	Forest prod- ucts and honey	00040000000000000000000000000000000000	16.5
Sold	Other animals and wool	φφο φων α 4 α 6 μα α α α α α α α α α α α α α α α α	24.2
	Swine	### ### ##############################	6.9
PERCENTAGE VALUE OF FARM PRODUCTS	Cattle	######################################	12.4 7.8 16.9
	Poultry and eggs	7.61 7.61 7.64 7.64 7.66 7.66 7.66 7.66 7.66 7.66	10.8
AGE VAL	Dairy prod- ucts	26.5 - 20.0 - 20	36.0 15.2 29.2
Percent	Vege- tables fruits and nursery	0008400014014014014014160141001410014100	6.1.4 6.4.4
	Po- tatoes roots and tobacco	11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	3.00
	Other grains and forage	1447144884-447801 8188888884488446 1467790466488488488	4 I w
	Wheat	111111111111111111111111111111111111111	f I I
	Area No.	157 157 157 157 157 157 157 157 157 157	185 186 187
	PROVINCE	Quebec.—Conc	Nova Scotia

285 931 150 410 158 256 422	379 488 781 347
40.7 18.8 61.8 61.8 58.8 49.1 34.7	20.3 14.4 5.9 17.7
25.1 16.2 36.2 36.2 116.7 32.6	36.4 28.2 18.9 41.4
000110000100000000000000000000000000000	100
40.5 6.2 40.1 13.7 9.8	2.0
4.8 12.0 3.0 22.4 15.1 4.4	7.1 16.1 12.8 13.8
00000000000000000000000000000000000000	13.2 14.6 9.7 8.7
17.3 10.9 13.0 14.2 10.8	6.8 12.4 8.7 9.1
6.7. 12.9 14.9 11.4	7.6 10.4 9.1 17.7
17.6 66.7 14.4 57.9 19.0 23.6 47.0	11.9 16.4 14.9 11.3
41.60 0.044.70 0.044.70	0.0
94444949 \$	22.7 39.5 25.3
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	Prince Edward Island

















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